

**City of Phoenix SR85 Landfill
Permit Number V03-002
February 3, 2005**

In accordance with Maricopa County Air Pollution Control Rules and Regulations (Rules), Rule 210 § 302.2, all Conditions of this Permit are federally enforceable unless they are identified as being locally enforceable only. However, any Permit Condition identified as locally enforceable only will become federally enforceable if, during the term of this Permit, the underlying requirement becomes a requirement of the Clean Air Act (CAA) or any of the CAA's applicable requirements.

All federally enforceable terms and conditions of this Permit are enforceable by the Administrator of the United States Environmental Protection Agency (Administrator or Administrator of the USEPA hereafter) and citizens under Section 304 of the CAA.

Any cited regulatory paragraphs or section numbers refer to the version of the regulation that was in effect on the first date of public notice of the applicable Permit Condition unless specified otherwise.

GENERAL CONDITIONS:

- 1. AIR POLLUTION PROHIBITED:** [County Rule 100 §301] [SIP Rule 3]
The Permittee shall not discharge from any source whatever into the atmosphere regulated air pollutants which exceed in quantity or concentration that specified and allowed in the County or State Implementation Plan (SIP) Rules, the Arizona Administrative Code (AAC) or the Arizona Revised Statutes (ARS), or which cause damage to property or unreasonably interfere with the comfortable enjoyment of life or property of a substantial part of a community, or obscure visibility, or which in any way degrade the quality of the ambient air below the standards established by the Maricopa County Board of Supervisors or the Director of the Arizona Department of Environmental Quality (ADEQ).
- 2. CIRCUMVENTION:** [County Rule 100 §104] [40 CFR 60.12] [40 CFR 63.4(b)]
The Permittee shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of regulated air pollutants to the atmosphere, conceals or dilutes an emission which would otherwise constitute a violation of this Permit or any Rule or any emission limitation or standard. The Permittee shall not circumvent the requirements concerning dilution of regulated air pollutants by using more emission openings than is considered normal practice by the industry or activity in question.
- 3. CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS:**
[County Rule 100 §401] [County Rule 210 §§301.7, 302.1e(1), 305.1c(1) & 305.1e]
Any application form, report, or compliance certification submitted under the County Rules or these Permit Conditions shall contain certification by a responsible official of truth, accuracy, and completeness of the application form or report as of the time of submittal. This certification and any other certification required under the County Rules or these Permit Conditions shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

4. COMPLIANCE:

A. COMPLIANCE REQUIRED:

- 1) The Permittee must comply with all conditions of this permit and with all applicable requirements of Arizona air quality statutes and the air quality rules. Compliance with permit terms and conditions does not relieve, modify, or otherwise affect the Permittee's duty to comply with all applicable requirements of Arizona air quality statutes and the Maricopa County Air Pollution Control Regulations. Any permit non-compliance is grounds for enforcement action; for a permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. Noncompliance with any federally enforceable requirement in this Permit constitutes a violation of the Act. [This Condition is federally enforceable if the condition or requirement itself is federally enforceable and only locally enforceable if the condition or requirement itself is locally enforceable only]
[County Rule 210 §§301.8b(4) & 302.1h(1)]
- 2) The Permittee shall halt or reduce the permitted activity in order to maintain compliance with applicable requirements of Federal laws, Arizona laws, the County Rules, or other conditions of this Permit.
[County Rule 210 §302.1h(2)]
- 3) For any major source operating in a nonattainment area for any pollutant(s) for which the source is classified as a major source, the source shall comply with reasonably available control technology (RACT) as defined in County Rule 100.
[County Rule 210 §302.1(h)(6)] [SIP Rule 220 §302.2]
- 4) For any major source operating in a nonattainment area designated as serious for PM₁₀, for which the source is classified as a major source for PM₁₀, the source shall comply with the best available control technology (BACT), as defined in County Rule 100.
[County Rule 210 §302.1(h)(7)]

B. COMPLIANCE CERTIFICATION REQUIREMENTS: [County Rule 210 §305.1d]

The Permittee shall file an annual compliance certification with the Control Officer and also with the Administrator of the USEPA. The report shall certify compliance with the terms and conditions contained in this Permit, including emission limitations, standards, or work practices. The certification shall be on a form supplied or approved by the Control Officer and shall include each of the following:

- 1) The identification of each term or condition of the permit that is the basis of the certification;
- 2) The compliance status;
- 3) Whether compliance was continuous or intermittent;
- 4) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
- 5) Other facts as the Control Officer may require to determine the compliance status of the source.

The annual certification shall be filed at the same time as the second semiannual monitoring report required by the Specific Condition section of these Permit Conditions and every 12 months thereafter.

C. COMPLIANCE PLAN: [County Rule 210 §305.1g]

Based on the certified information contained in the application for this Permit, the facility is in compliance with all applicable requirements in effect as of the first date of public notice of the proposed conditions for this Permit unless a compliance plan is included in the Specific Conditions section of this Permit. The Permittee shall continue to comply with all applicable requirements and shall meet any applicable requirements that may become effective during the term of this permit on a timely basis. [This Condition is federally enforceable if the applicable requirement itself is federally enforceable and only locally enforceable if the applicable requirement itself is locally enforceable only]

5. CONFIDENTIALITY CLAIMS:

Any records, reports or information obtained from the Permittee under the County Rules or this Permit shall be available to the public, unless the Permittee files a claim of confidentiality in accordance with ARS §49-487(c) which:

- A. precisely identifies the information in the permit(s), records, or reports which is considered confidential, and
 - B. provides sufficient supporting information to allow the Control Officer to evaluate whether such information satisfies the requirements related to trade secrets or, if applicable, how the information, if disclosed, could cause substantial harm to the person's competitive position.
- The claim of confidentiality is subject to the determination by the Control Officer as to whether the claim satisfies the claim for trade secrets.

[County Rule 100 §402] [County Rule 200 §411]

A claim of confidentiality shall not excuse the Permittee from providing any and all information required or requested by the Control Officer and shall not be a defense for failure to provide such information.

[County Rule 100 §402]

If the Permittee submits information with an application under a claim of confidentiality under ARS §49-487 and County Rule 200, the Permittee shall submit a copy of such information directly to the Administrator of the USEPA.

[County Rule 210 §301.5]

6. CONTINGENT REQUIREMENTS:

NOTE: This Permit Condition covers activities and processes addressed by the CAA which may or may not be present at the facility. This condition is intended to meet the requirements of both Section 504(a) of the 1990 Amendments to the CAA, which requires that Title V permits contain conditions necessary to assure compliance with applicable requirements of the Act as well as the Acid Rain provisions required to be in all Title V permits.

A. ACID RAIN: [County Rule 210 §§302.1b(2) & 302.1f] [County Rule 371 §301]

- 1). Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the CAA and incorporated under County Rule 371, both provisions shall be incorporated into this Permit and shall be enforceable by the Administrator.
- 2) The Permittee shall not allow emissions exceeding any allowances that the source lawfully holds under Title IV of the CAA or the regulations promulgated thereunder and incorporated under County Rule 371.

- a) No permit revision shall be required for increases in emissions that are authorized by allowances acquired under the acid rain program and incorporated under County Rule 371, provided that such increases do not require a permit revision under any other applicable requirement.
- b) No limit is placed on the number of allowances held by the Permittee. The Permittee may not, however, use allowances as a defense to non-compliance with any other applicable requirement.
- c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the CAA.
- d) All of the following prohibitions apply to any unit subject to the provisions of Title IV of the CAA and incorporated into this Permit under County Rule 371:
 - (1) Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or operators of the unit or the designated representative of the owners or operators.
 - (2) Exceedances of applicable emission rates.
 - (3) The use of any allowance prior to the year for which it was allocated.
 - (4) Violation of any other provision of the permit.

B. ASBESTOS: [40 CFR 61, Subpart M] [County Rule 370 §301.8 - locally enforceable only]
The Permittee shall comply with the applicable requirements of Sections 61.145 through 61.147 and 61.150 of the National Emission Standard for Asbestos and County Rule 370 for all demolition and renovation projects.

C. RISK MANAGEMENT PLAN (RMP): [40 CFR 68]
Should this stationary source, as defined in 40 CFR 68.3, be subject to the accidental release prevention regulations in 40 CFR Part 68, then the Permittee shall submit an RMP by the date specified in 40 CFR Section 68.10 and shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70. However, neither the RMP nor modifications to the RMP shall be considered to be a part of this Permit.

D. STRATOSPHERIC OZONE PROTECTION: [40 CFR 82 Subparts E, F, and G]
If applicable, the Permittee shall follow the requirements of 40 CFR 82.106 through 82.124 with respect to the labeling of products using ozone depleting substances.

If applicable, the Permittee shall comply with all of the following requirements with respect to recycling and emissions reductions:

- 1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices under 40 CFR 82.156.
- 2) Equipment used during maintenance, service, repair, or disposal of appliances must meet the standards for recycling and recovery equipment in accordance with 40 CFR 82.158.
- 3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by a certified technician under 40 CFR 82.161.

If applicable, the Permittee shall follow the requirements of 40CFR 82 Subpart G, including all Appendices, with respect to the safe alternatives policy on the acceptability of substitutes for ozone-depleting compounds.

- 7. DUTY TO SUPPLEMENT OR CORRECT APPLICATION:** [County Rule 210 §301.6]
If the Permittee fails to submit any relevant facts or has submitted incorrect information in a permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, the Permittee shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.

- 8. EMERGENCY EPISODES:** [County Rule 600 §302] [SIP Rule 600 §302]
If an air pollution alert, warning, or emergency has been declared, the Permittee shall comply with any applicable requirements of County Rule 600 §302.

- 9. EMERGENCY PROVISIONS:** [County Rule 130 §§201 & 402]
An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that cause the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

An emergency constitutes an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the requirements of this Permit Condition are met.

The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- A. An emergency occurred and that the Permittee can identify the cause or causes of the emergency;
- B. At the time of the emergency, the permitted source was being properly operated;
- C. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in this permit; and
- D. The Permittee as soon as possible telephoned the Control Officer, giving notice of the emergency, and submitted notice of the emergency to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of County Rule 210 §302.1.e(2) with respect to deviation reporting. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

This provision is in addition to any emergency or upset provision contained in any applicable requirement.

- 10. EXCESS EMISSIONS:** [County Rule 140 §§103, 400]
NOTE: There are reporting requirements associated with excess emissions. These requirements are contained in the Reporting section of the General Permit Conditions in a subparagraph called Excess Emissions. The definition of excess emissions can be found in County Rule 100 §200.
- A. Exemptions: The excess emissions provisions of this Permit Condition do not apply to the following standards and limitations:

- 1) Promulgated pursuant to Section 111 (Standards Of Performance for New Stationary Sources) of the Clean Air Act (Act) or Section 112 (National Emission Standards For Hazardous Air Pollutants) of the Act;
 - 2) Promulgated pursuant to Title IV (Acid Deposition Control) of the Act or the regulations promulgated thereunder and incorporated under Rule 371 (Acid Rain) of these rules or Title VI (Stratospheric Ozone Protection) of the Act;
 - 3) Contained in any Prevention Of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the Environmental Protection Agency (EPA);
 - 4) Included in a permit to meet the requirements of Rule 240 (Permit Requirements For New Major Sources And Major Modifications To Existing Major Sources), Subsection 308.1(e) (Permit Requirements For Sources Located In Attainment And Unclassified Areas) of these rules.
- B. Affirmative Defense For Malfunctions: Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. The owner and/or operator of a source with emissions in excess of an applicable emission limitation due to malfunction has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner and/or operator of the source has complied with the excess emissions reporting requirements of these Permit Conditions and has demonstrated all of the following:
- 1) The excess emissions resulted from a sudden and unavoidable breakdown of the process equipment or the air pollution control equipment beyond the reasonable control of the operator;
 - 2) The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
 - 3) If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, then the owner and/or operator satisfactorily demonstrated that such measures were impractical;
 - 4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
 - 5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
 - 6) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
 - 7) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in County Rule 510 that could be attributed to the emitting source;
 - 8) The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
 - 9) All emissions monitoring systems were kept in operation, if at all practicable; and
 - 10) The owner's and/or operator's actions in response to the excess emissions were documented by contemporaneous records.

C. Affirmative Defense For Startup And Shutdown:

- 1) Except as provided in paragraph 2) below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. The owner and/or operator of a source with emissions in excess of an applicable emission limitation due to startup and shutdown has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner and/or operator of the source has complied with the excess emissions reporting requirements of these Permit Conditions and has demonstrated all of the following:
 - a. The excess emissions could not have been prevented through careful and prudent planning and design;
 - b. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
 - c. The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
 - d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable, during periods of such emissions;
 - e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
 - f. During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in County Rule 510 (Air Quality Standards) that could be attributed to the emitting source;
 - g. All emissions monitoring systems were kept in operation, if at all practicable; and
 - h. The owner's and/or operator's actions in response to the excess emissions were documented by contemporaneous records.
- 2) If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to paragraph A. of this Permit Condition.

D. Affirmative Defense For Malfunctions During Scheduled Maintenance: If excess emissions occur due to malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to paragraph B. of this Permit Condition.

E. Demonstration Of Reasonable And Practicable Measures: For an affirmative defense under paragraphs A and B of this Permit Condition, the owner and/or operator of the source shall demonstrate, through submission of the data and information required by this Permit Condition and the excess emissions reporting requirements of these Permit Conditions, that all reasonable and practicable measures within the owner's and/or operator's control were implemented to prevent the occurrence of the excess emissions.

11. **FEES:** [County Rule 200 §409] [County Rule 210 §§302.1i & 401]

The Permittee shall pay fees to the Control Officer under ARS 49-480(D) and County Rule 280.

12. **MODELING:** [County Rule 200 §407] [locally enforceable only]

Where the Control Officer requires the Permittee to perform air quality impact modeling, the Permittee shall perform the modeling in a manner consistent with the "Guideline on Air Quality Models (Revised)" (EPA-450/2-78-027R, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, July 1986) and "Supplement B to the Guideline on Air Quality Models" (U.S. Environmental Protection Agency, September 1990). Both documents shall be referred to hereinafter as "Guideline", and are adopted by reference. Where the person can demonstrate that an air quality impact model specified in the guideline is inappropriate, the model may be modified or another model substituted if found to be acceptable to the Control Officer.

13. MONITORING / TESTING:

- A. The Permittee shall monitor, sample, or perform other studies to quantify emissions of regulated air pollutants or levels of air pollution that may reasonably be attributable to the facility if required to do so by the Control Officer, either by Permit or by order in accordance with County Rule 200 §309.

[County Rule 200 §309] [SIP Rule 41]

- B. Except as otherwise specified in these Permit Conditions or by the Control Officer, the Permittee shall conduct required testing used to determine compliance with standards or permit conditions established under the County or SIP Rules or these Permit Conditions in accordance with County Rule 270 and the applicable testing procedures contained in the applicable Rule, the Arizona Testing Manual for Air Pollutant Emissions or other approved USEPA test methods.

[County Rule 200 §408] [County Rule 210 §302.1.c] [County Rule 270 §§300 & 400]
[SIP Rule 27]

- C. The owner or operator of a permitted source shall provide, or cause to be provided, performance testing facilities as follows:

- 1) Sampling ports adequate for test methods applicable to such source.
- 2) Safe sampling platform(s).
- 3) Safe access to sampling platforms(s).
- 4) Utilities for sampling and testing equipment.

[County Rule 270 §405] [SIP Rule 42]

14. PERMITS:

- A. BASIC:

[County Rule 210 §302.1h(3)]

This Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.

- B. DUST CONTROL PLAN REQUIREMENTS:

(NOTE: If the Permittee engages in or allows any routine dust generating activities at the facility, the Permittee needs to have the routine dust generating activity covered as part of this Permit. Nonroutine activities, such as construction, require a separate Earthmoving Permit that must be obtained from the Control Officer before the activity may begin.)

- 1) The Permittee must first submit a Dust Control Plan and obtain the Control Officer's approval of the Dust Control Plan before commencing any routine dust generating operation.

[County Rule 310 §303.3] [SIP Rule 310 §303.3]

- 2) A Dust Control Plan shall not be required to play on a ball field and/or for landscape maintenance. For the purpose of this Permit Condition, landscape maintenance does not include grading, trenching, nor any other mechanized surface disturbing activities.

[County Rule 310 §303.4] [SIP Rule 310 §303.4]

- 3) Any Dust Control Plan shall, at a minimum, contain all the information described in Section 304 of Rule 310.

[County Rule 310 §§303.1 & 304] [SIP Rule 310 §§303.1 & 304]

- 4) Regardless of whether an approved Dust Control Plan is in place or not, the Permittee is still subject to all requirements of Rule 310 at all times.

[County Rule 310 §303] [SIP Rule 310 §303]

C. PERMITS AND PERMIT CHANGES, AMENDMENTS AND REVISIONS:

- 1) The Permittee shall comply with the Administrative Requirements of Section 400 of County Rule 210 for all changes, amendments and revisions at the facility for any source subject to regulation under County Rule 200, shall comply with all required time frames, and shall obtain any required preapproval from the Control Officer before making changes. All applications shall be filed in the manner and form prescribed by the Control Officer. The application shall contain all the information necessary to enable the Control Officer to make the determination to grant or to deny a permit or permit revision including information listed in County Rule 200 §308 and County Rule 210 §§301 & 302.3.

[County Rule 200 §§301 & 308] [County Rule 210 §§301.4a, b, c, & 400]

- 2) The Permittee shall supply a complete copy of each application for a permit, a minor permit revision, or a significant permit revision directly to the Administrator of the USEPA. The Control Officer may require the application information to be submitted in a computer-readable format compatible with the Administrator's national database management system.

[County Rule 210 §§303.1a, 303.2, 405.4, & 406.4]

- 3) While processing an application, the Control Officer may require the applicant to provide additional information and may set a reasonable deadline for a response.

[County Rule 210 §301.4f]

- 4) No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

[County Rule 210 §302.1j]

D. POSTING:

- 1) The Permittee shall keep a complete permit clearly visible and accessible on the site where the equipment is installed.

[County Rule 200 §311]

- 2) If a Dust Control Plan, as required by Rule 310, has been approved by the Control Officer, the Permittee shall post a copy of the approved Dust Control Plan in a conspicuous location at the work site, within on-site equipment, or in an on-site vehicle, or shall otherwise keep a copy of the Dust Control Plan available on site at all times.

[County Rule 310 §401] [SIP Rule 310 §401]

E. PROHIBITION ON PERMIT MODIFICATION: [County Rule 200 §310]

The Permittee shall not willfully deface, alter, forge, counterfeit, or falsify this permit.

F. RENEWAL:

- 1) The Permittee shall submit an application for the renewal of this Permit in a timely and complete manner. For purposes of permit renewal, a timely application is one that is submitted at least six months, but not more than 18 months, prior to the date of permit expiration. A complete application shall contain all of the information required by the County Rules including Rule 200 §308 and Rule 210 §§301 & 302.3.

[County Rule 210 §§301.2a, 301.4a, b, c, d, h & 302.3]

- 2) The Permittee shall file all permit applications in the manner and form prescribed by the Control Officer. To apply for a permit renewal, the Permittee shall complete the "Standard Permit Application Form" and shall supply all information, including the information required by the "Filing Instructions" as shown in Appendix B of the County Rules, which is necessary to enable the Control Officer to make the determination to grant or to deny a permit which shall contain such terms and conditions as the Control Officer deems necessary to assure a source's compliance with the requirements of the CAA, ARS and County Rules.

[County Rule 200 §§308 & 309] [County Rule 210 §301.1]

- 3) The Control Officer may require the Permittee to provide additional information and may set a reasonable deadline for a response.

[County Rule 210 §301.4f]

- 4) If the Permittee submits a timely and complete application for a permit renewal, but the Control Officer has failed to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the renewal permit has been issued or denied. This protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit, by the deadline specified by the Control Officer, any additional information identified as being needed to process the application.

[County Rule 200 §403.2] [County Rule 210 §§301.4f & 301.9]

G. REVISION / REOPENING / REVOCATION:

- 1) This permit shall be reopened and revised to incorporate additional applicable requirements adopted by the Administrator pursuant to the CAA that become applicable to the facility if this permit has a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this Permit is due to expire unless the original permit or any of its terms have been extended pursuant to Rule 200 §403.2.

[County Rules 200 §402.1]

Any permit revision required under this Permit Condition, 14.G.1, shall reopen the entire permit and shall comply with provisions in County Rule 200 for permit renewal (*Note: this includes a facility wide application and public comment on the entire permit*) and shall reset the five year permit term.

[County Rules 200 §402.1a(1) & 210 §302.5]

- 2) This permit shall be reopened and revised under any of the following circumstances:

- a) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Title V permit.
- b) The Control Officer or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- c) The Control Officer or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

Proceedings to reopen and issue a permit under this Permit Condition, 14.G.2, shall follow the same procedures as apply to initial permit issuance and shall effect only those parts of the Permit for which cause to reopen exists.

[County Rule 200 §402.1]

- 3) This permit shall be reopened by the Control Officer and any permit shield revised, when it is determined that standards or conditions in the permit are based on incorrect information provided by the applicant.

[County Rule 210 §407.3]

- 4) This Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Permit revision, revocation and reissuance, or termination or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.

[County Rule 210 §302.1h(3)]

H. REVISION UNDER A FEDERAL HAZARDOUS AIR POLLUTANT STANDARD:

[County Rule 210 §301.2c] [locally enforceable only]

If the Permittee becomes subject to a standard promulgated by the Administrator under Section 112(d) of the CAA, the Permittee shall, within 12 months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

I. REQUIREMENTS FOR A PERMIT:

- 1) Air Quality Permit: Except as noted under the provisions in Sections 403 and 405 of County Rule 210, no source may operate after the time that it is required to submit a timely and complete application, except in compliance with a permit issued under County Rule 210. Permit expiration terminates the Permittee's right to operate. However, if a source submits a timely and complete application, as defined in County Rule 210 §301, for permit issuance, revision, or renewal, the source's failure to have a permit is not a violation of the County Rules until the Control Officer takes final action on the application. The Source's ability to operate without a permit as set forth in this paragraph shall be in effect from the date the application is determined to be complete until the final permit is issued. This protection shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit, by the deadline specified in writing by the Control Officer, any additional information identified as being needed to process the application. If a source submits a timely and complete application for a permit renewal, but the Control Officer has failed to issue or deny the renewal permit before the end of

the term of the previous permit, then the permit shall not expire until the permit renewal has been issued or denied.

[County Rule 210 §301.9]

2) Earthmoving Permit:

(NOTE: If the Permittee engages in or allows any routine dust generating activities at the facility, the Permittee needs to have the routine dust generating activity covered as part of this Permit. Non-routine activities, such as construction, require a separate Earthmoving Permit that must be obtained from the Control Officer before the activity may begin.)

The Permittee shall not cause, commence, suffer, allow, or engage in any earthmoving operation that disturbs a total surface area of 0.10 acre or more without first obtaining a permit from the Control Officer. Permits shall not be required for earthmoving operations for emergency repair of utilities, paved roads, unpaved roads, shoulders, and/or alleys.

[County Rule 200 §305]

3) Burn Permit: The Permittee shall obtain a Permit To Burn from the Control Officer before conducting any open outdoor fire except for the activities listed in County Rule 314 §§302.1 and 302.2.

[County Rule 314] [County Rule 200 §306] [SIP Rule 314]

J. RIGHTS AND PRIVILEGES:

[County Rule 210 §302.1h (4)]

This Permit does not convey any property rights nor exclusive privilege of any sort.

K. SEVERABILITY:

[County Rule 210 §302.1g]

The provisions of this Permit are severable, and, if any provision of this Permit is held invalid, the remainder of this Permit shall not be affected thereby.

L. SCOPE:

The issuance of any permit or permit revision shall not relieve the Permittee from compliance with any Federal laws, Arizona laws, or the County or SIP Rules, nor does any other law, regulation or permit relieve the Permittee from obtaining a permit or permit revision required under the County Rules.

[County Rule 200 §308]

Nothing in this permit shall alter or affect the following:

- 1) The provisions of Section 303 of the Act (Emergency Orders), including the authority of the Administrator of the USEPA under that section.
- 2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance.
- 3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act.
- 4) The ability of the Administrator of the USEPA or of the Control Officer to obtain information from the Permittee under Section 114 of the Act, or any provision of State law.
- 5) The authority of the Control Officer to require compliance with new applicable requirements adopted after the permit is issued. [locally enforceable only]

[County Rule 210 §407.2]

M. TERM OF PERMIT: [County Rule 210 §§302.1a & 402]
This Permit shall remain in effect for no more than 5 years from the date of issuance.

N. TRANSFER: [County Rule 200 §404]
Except as provided in ARS §49-429 and County Rule 200, this permit may be transferred to another person if the Permittee gives notice to the Control Officer in writing at least 30 days before the proposed transfer and complies with the permit transfer requirements of County Rule 200 and the administrative permit amendment procedures under County Rule 210.

15. RECORDKEEPING:

A. RECORDS REQUIRED: [County Rule 100 §501] [County Rule 310 §502] [SIP Rule 40 A]
The Permittee shall maintain records of all emissions testing and monitoring, records detailing all malfunctions which may cause any applicable emission limitation to be exceeded, records detailing the implementation of approved control plans and compliance schedules, records required as a condition of any permit, records of materials used or produced, and any other records relating to the emission of air contaminants which may be requested by the Control Officer.

B. RETENTION OF RECORDS:
Unless a longer time frame is specified by these Permit Conditions, information and records required by applicable requirements and copies of summarizing reports recorded by the Permittee and submitted to the Control Officer shall be retained by the Permittee for 5 years after the date on which the information is recorded or the report is submitted
[County Rule 100 §504] [SIP Rule 40 C]

The Permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

[County Rule 210 §§302.1d(2)]

C. MONITORING RECORDS: [County Rule 210 §§302.1d(1) & 305.1b]
Records of any monitoring required by this Permit shall include the following:

- 1) The date, place as defined in the permit, and time of sampling or measurements;
- 2) The date(s) analyses were performed;
- 3) The name of the company or entity that performed the analysis;
- 4) The analytical techniques or methods used;
- 5) The results of such analysis; and
- 6) The operating conditions as existing at the time of sampling or measurement.

D. RIGHT OF INSPECTION OF RECORDS: [County Rule 100 §106] [SIP Rule 40 D]
When the Control Officer has reasonable cause to believe that the Permittee has violated or is in violation of any provision of County Rule 100 or any County Rule adopted under County Rule 100, or any requirement of this permit, the Control Officer may request, in writing, that the Permittee produce all existing books, records, and other documents evidencing tests, inspections, or studies which may reasonably relate to compliance or noncompliance with County Rules adopted under County Rule 100. No person shall fail nor refuse to produce all existing documents required in such written request by the Control Officer.

16. REPORTING:

NOTE: See the Permit Condition titled Certification Of Truth, Accuracy and Completeness in conjunction with reporting requirements.

- A. **ANNUAL EMISSION INVENTORY REPORT:** [County Rule 100 §505] [SIP Rule 40 B]
Upon request of the Control Officer and as directed by the Control Officer, the Permittee shall complete and shall submit to the Control Officer an annual emissions inventory report. The report is due by April 30, or 90 days after the Control Officer makes the inventory form(s) available, whichever occurs later.

The annual emissions inventory report shall be in the format provided by the Control Officer.

The Control Officer may require submittal of supplemental emissions inventory information forms for air contaminants under ARS §49-476.01, ARS §49-480.03 and ARS §49-480.04.

- B. **DATA REPORTING:** [County Rule 100 §502]
When requested by the Control Officer, the Permittee shall furnish to the Maricopa County Air Quality Division (Division hereafter) information to locate and classify air contaminant sources according to type, level, duration, frequency, and other characteristics of emissions and such other information as may be necessary. This information shall be sufficient to evaluate the effect on air quality and compliance with the County or SIP Rules. The Permittee may subsequently be required to submit annually, or at such intervals specified by the Control Officer, reports detailing any changes in the nature of the source since the previous report and the total annual quantities of materials used or air contaminants emitted.

- C. **DEVIATION REPORTING:** [County Rule 210 §§302.1e & 305.1c]
The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions. Unless specified otherwise elsewhere in these Permit Conditions, an upset for the purposes of this Permit Condition shall be defined as the operation of any process, equipment or air pollution control device outside of either its normal design criteria or operating conditions specified in this Permit and which results in an exceedance of any applicable emission limitation or standard. The Permittee shall submit the report to the Control Officer within 2 working days from knowledge of the deviation. The report shall contain a description of the probable cause of such deviations and any corrective actions or preventive measures taken. In addition, the Permittee shall report within a reasonable time of any long-term corrective actions or preventative actions taken as the result of any deviations from permit requirements.

All instances of deviations from the requirements of this Permit shall also be clearly identified in the semiannual monitoring reports required in the Specific Condition section of these Permit Conditions.

- D. **EMERGENCY REPORTING:** [County Rule 130 §402.4]
(NOTE: Emergency Reporting is one of the special requirements which must be met by a Permittee wishing to claim an affirmative defense under the emergency provisions of County Rule 130. These provisions are listed earlier in these General Conditions in the section titled "Emergency Provisions". Since it is a form of deviation reporting, the filing of an emergency report also satisfies the requirement of County Rule 210 to file a deviation report.)

The Permittee shall, as soon as possible, telephone the Control Officer giving notice of the emergency, and submitted notice of the emergency to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

E. EMISSION STATEMENTS REQUIRED AS STATED IN THE ACT:

[County Rule 100 §503]

Upon request of the Control Officer and as directed by the Control Officer, the Permittee shall provide the Control Officer with an emission statement, in such form as the Control Officer prescribes, showing measured actual emissions or estimated actual emissions of NO_x and volatile organic compounds (VOC) from that source. At a minimum, the emission statement shall contain all information contained in the "Guidance on Emission Statements" document as described in the USEPA's Aerometric Information Retrieval System (AIRS) Fixed Format Report (AFP 644). The statement shall contain emissions for the time period specified by the Control Officer. Statements shall be submitted annually.

F. EXCESS EMISSIONS REPORTING: [County Rule 140 §500] [locally enforceable only]

(NOTE: This reporting subsection is associated with the requirements listed earlier in these General Conditions in the section titled "Excess Emissions".)

- 1) The owner and/or operator of any source shall report to the Control Officer any emissions in excess of the limits established by the County or SIP Rules or by these Permit Conditions. The report shall be in two parts as specified below:
 - a) Notification by telephone or facsimile within 24 hours of the time when the owner and/or operator first learned of the occurrence of excess emissions that includes all available information from paragraph 2) of this Permit Condition.
 - b) Detailed written notification by submission of an excess emissions report within 72 hours of the notification required by paragraph 1) a) of this Permit Condition.
- 2) The excess emissions report shall contain the following information:
 - a) The identity of each stack or other emission point where the excess emissions occurred;
 - b) The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
 - c) The time and duration or expected duration of the excess emissions;
 - d) The identity of the equipment from which the excess emissions emanated;
 - e) The nature and cause of such emissions;
 - f) The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions;
 - g) The steps that were or are being taken to limit the excess emissions; and
 - h) If this Permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the Permit procedures.
- 3) In the case of continuous or recurring excess emissions, the notification requirements of this Permit Condition shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring

after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to paragraphs 1) and 2) of this Permit Condition.

G. OTHER REPORTING:

[County Rule 210 §302.1h(5)]

The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing this permit, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by this Permit. For information claimed to be confidential, the Permittee shall furnish a copy of such records directly to the Administrator of the USEPA along with a claim of confidentiality as covered elsewhere in these Permit Conditions.

17. RIGHT TO ENTRY AND INSPECTION OF PREMISES:

The Control Officer, during reasonable hours, for the purpose of enforcing and administering County Rules or any provision of ARS relating to the emission or control prescribed pursuant thereto, may enter every building, premises, or other place, except the interior of structures used as private residences. Every person is guilty of a petty offense under ARS §49-488 who in any way denies, obstructs or hampers such entrance or inspection that is lawfully authorized by warrant.

[County Rule 100 §105]

The Permittee shall allow the Control Officer or his authorized representative, upon presentation of proper credentials and other documents as may be required by law, to:

- A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
[County Rule 210 §305.1f] [SIP Rule 43]
- B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
[County Rule 210 §305.1f] [SIP Rule 43]
- C. Inspect, at reasonable times, any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
[County Rule 210 §305.1f] [SIP Rule 43]
- D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
[County Rule 210 §305.1f] [SIP Rule 43]
- E. To record any inspection by use of written, electronic, magnetic, and photographic media.
[County Rule 210 §305.1f] [Locally enforceable only]

SPECIFIC CONDITIONS:

18. ALLOWABLE EMISSIONS LIMITATIONS

A. Facility-Wide

- 1) The Permittee shall not allow emissions from the facility of Volatile Organic Compounds (VOCs) to be emitted into the atmosphere in excess of 25 tons per year unless a landfill gas collection and destruction system meeting the requirements of this permit is installed and operating. The Permittee shall calculate the annual VOC emissions by calculating the total actual VOC emissions from the landfill. The Permittee shall calculate the VOC emissions from the landfill using the AP-42 landfill air emissions estimations procedure using the AP-42 default values for the methane generation constant (k) and the methane generation potential (L₀) for arid climates and no co-disposal of industrial solvent waste. The value of NMOC Concentration

(CNMOC), shall be the same value used in the application for this permit (4,000 ppm by volume of hexane) until a site specific value for CNMOC is submitted to and approved by the Control Officer. The VOC emissions may be calculated by taking 39% of the NMOC emissions. The calculation of projected annual emissions for the next one-year period should be based on the emissions calculated for the previous six-month period, projected waste receipts, and existing and anticipated contracts.

[County Rule 241 §301][locally enforceable only]

- 2) The Permittee shall not allow non-fugitive emissions from the facility to be emitted into the atmosphere in excess of the following:

Table 1

| Pollutant | tons per year |
|-----------------|---------------|
| VOC | 76 |
| NO _x | 25 |

[County Rule 210 §302.1b]

B. Enclosed Flare

The Permittee shall not allow emissions from the enclosed flares to exceed any of the following limits:

- 1) 0.041 pounds of oxides of nitrogen (measured as NO₂) per million British Thermal Units (0.041 lb/MMBtu) of landfill gas.
- 2) 0.13 pounds of carbon monoxide per million British Thermal Units (0.13 lb/MMBtu) of landfill gas.

[County Rule 241 §301]

C. Opacity

- 1) The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20 percent opacity, except as provided in County Rule 300 §302.

[County Rule 300 §301][locally enforceable only] [County Rule 324 §303]

- 2) Except as otherwise provided in Regulation I, Rule 4, Exceptions, the opacity of any plume or effluent from any source of emissions, other than uncombined water, shall not be greater than 40 percent opacity as determined by Reference Method 9 in the Arizona Testing Manual.

[SIP Rule 30]

- 3) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

[40 CFR 60 §18(c)(1)][County Rule 360 §301.1]

D. Fugitive Dust Sources

- 1) The Permittee shall not allow visible fugitive dust emissions to exceed 20% opacity. Exceedances of the opacity limit that occur due to a wind event shall constitute a violation of the opacity limit. However, it shall be an affirmative defense in an enforcement action if the Permittee demonstrates all of the following conditions:

- a) All control measures required were followed and 1 or more of the control measures in Table 20 & 21 of Appendix B of this permit were applied and maintained;
- b) The 20% opacity exceedance could not have been prevented by better application, implementation, operation, or maintenance of control measures;
- c) The Permittee compiled and retained records, in accordance with the recordkeeping requirements of this permit; and
- d) The occurrence of a wind event on the day(s) in question is documented by records. The occurrence of a wind event must be determined by the nearest Maricopa County Environmental Services Department Air Quality Division monitoring station, from any other certified meteorological station, or by a wind instrument that is calibrated according to manufacturer's standards and that is located at the site being checked.

[County Rule 310 §301.1, Tables 20 & 21][SIP Rule 310 §301.1 and Table 2]

- 2) No opacity limitation shall apply to emergency maintenance of flood control channels and water retention basins, provided that control measures are implemented.

[County Rule 310 §301.2][locally enforceable only][SIP Rule 30]

E. SO₂

The Permittee shall not emit into the ambient air any sulfur oxide or sulfuric acid in such manner and amounts as to result in ground level concentrations at any one place beyond the premises on which the source is located exceeding those limits shown in the following table:

Table 2: SO₂ Emission Limits

| Concentration of SO ₂ | Averaging Time |
|----------------------------------|----------------|
| 850µg/m ³ | 1 hour |
| 250µg/m ³ | 24 hour |
| 120µg/m ³ | 72 hour |

[SIP Rule 32]

F. H₂S

The Permittee shall not emit hydrogen sulfide (H₂S) from any location in such a manner or amount that the concentration of such emissions in the ambient air at any occupied place beyond the premises on which the source is located exceeds 0.03 parts per million by volume (ppm_v) for any averaging period of 30 minutes or more.

[County Rule 320 §304]

19. OPERATIONAL LIMITATIONS AND STANDARDS

A. Operational Requirements for the Collection and Control System

- 1) If the calculated NMOC emission rate determined using the procedures specified in 40 CFR 60.754 is equal to or greater than 50 megagrams per year, or the calculated VOC emissions as required by Permit Condition 20.I exceed 20 tons per year, whichever is earlier, the Permittee shall:
 - a) Submit a collection and control system design plan prepared by a professional engineer to the Control Officer within 1 year:

- (1) The collection and control system as described in the plan shall meet the design requirements of this permit.
 - (2) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the Permittee.
 - (3) The collection and control system design plan shall either conform with the specifications for active collection systems of 40 CFR 60.759 or include a demonstration to the Control Officer's satisfaction of the sufficiency of the alternative provisions.
- b) Install a collection and control system that captures the gas generated within the landfill as required by this permit within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year.

[40 CFR 60 §752 (b)(2)(i) and (ii)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56][County Rule 241 §301]
- 2) The Permittee's active collection system shall meet the following requirements:
 - a) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;
 - b) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:
 - (1) 5 years or more if active; or
 - (2) 2 years or more if closed or at final grade.
 - c) Collect gas at a sufficient extraction rate;
 - d) Be designed to minimize off-site migration of subsurface gas.

[40 CFR 60 §752 (b)(2)(ii)(A) (1) through (4)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 3) The Permittee's passive collection system shall meet the following requirements:
 - (1) Comply with the provisions specified in 40 CFR 60§752 (b)(2)(ii)(A)(1) and (2), and 60§752(b)(2)(ii)(A)(4).
 - (2) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 40 CFR 258§40.

[40 CFR 60 §752 (b)(2)(ii)(B) (1) through (2)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 4) The Permittee shall route all the collected gas to a control system that complies with one of the following requirements below, a), b), or c).:
 - a) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial

startup of the approved control system using the test methods specified in 40 CFR 60 §754(d). The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in 40 CFR 60 §756(b).

- b) An open flare designed and operated in accordance with 40 CFR 60§18.
- c) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of 40 CFR 60 §752(b)(2)(iii)(A) or (B).

[40 CFR 60 §752 (b)(2)(iii)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]

- 5) An enclosed flare shall be installed, operated, and maintained at all times, as required, except during an emergency or for maintenance purposes. Prior to use of an alternative device during these periods, to demonstrate compliance with 40 CFR 60 §752(b)(2)(iii) and Rule 241 using a device other than an enclosed flare, the Permittee shall provide information satisfactory to the Control Officer as provided in 40 CFR 60 §752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Control Officer shall review the information and either approve it, disapprove it, or request that additional information be submitted. In the event of temporary emergency installations, the Control Officer may permit the use of an alternative device for which a BACT determination shall be made on a case by case basis. During maintenance installations, the control device shall meet the requirements of 40 CFR 60 §752 and Rule 241.

The Control Officer may specify additional appropriate monitoring and recordkeeping procedures. If a collection system that does not meet the specifications in 40 CFR 60 §759 is installed or alternative parameters to those required by 40 CFR 60 §753 through §756 are monitored, the Permittee shall provide information satisfactory to the Control Officer as provided in 40 CFR 60 §752(b)(2)(i) (B) and (C) describing the design and operation of the collection system, the operating parameters and their ranges that would indicate proper performance, and appropriate monitoring and recordkeeping procedures. The Control Officer may specify additional appropriate monitoring and recordkeeping procedures.

[40 CFR 60 §756 (d) and (e)][County Rule 360 §301.74]
[40 CFR 63 §1955(a)(1)][County Rule 370 §302.56][County Rule 210 §302.1]

- 6) When complying with 40 CFR 60§752 (b)(2)(iii) using an open flare, the Permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:
 - (1) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.
 - (2) A device that records flow to or bypass of the flare. The Permittee shall either:
 - (a) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

- (b) Secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
[40 CFR 60 §752 (b)(2)(iii)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- 7) The Permittee shall operate the collection and control device installed to comply with 40 CFR Part 60 §752 in accordance with the provisions of 40 CFR 60 §753, 40 CFR 60 §755 and 40 CFR 60 §756.
[40 CFR 60 §752 (b)(2)(iv)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- 8) The collection and control system may be capped or removed provided that all the following conditions of these Permit Conditions are met:
 - a) The landfill shall be a closed landfill as defined in 40 CFR 60 §751. b) The collection and control system shall have been in operation a minimum of 15 years; and
 - b) Following the procedures specified in 40 CFR 60 §754(b), the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.
[40 CFR 60 §752(b)(2)(v)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
 - c) Following the procedures specified in this permit, the VOC emissions from the landfill shall be less than 25 tons per year as calculated using the data from the three tests required in the previous subsection.
[County Rule 241 §301][locally enforceable only]
- 9) The Permittee of an active collection and control system used to comply with the provisions of 40 CFR 60 §752(b)(2)(ii) shall meet the following requirements:
 - a) Operate the collections system such that the gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
 - (1) 5 years or more if active; or
 - (2) 2 years or more if closed or at final grade;
[40 CFR 60 §753 (a)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
 - b) Operate the collection system with negative pressure at each wellhead except under the following conditions:
 - (1) A fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60 §757(f)(1);
 - (2) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan;

- (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Control Officer;
[40 CFR 60 §753 (b)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.
[40 CFR 60 §753 (c)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- (1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by 40 CFR 60 §752(b)(2)(i).
[40 CFR 60 §753 (c)(1)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
 - (2) Unless an alternative test method is established as allowed by 40 CFR 60 §752(b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:
 - (a) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;
 - (b) A data recorder is not required;
 - (c) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;
 - (d) A calibration error check is not required;
 - (e) The allowable sample bias, zero drift, and calibration drift are ±10 percent.[40 CFR 60 §753 (c)(2)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface to the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative-traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.
[40 CFR 60 §753 (d)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]

- e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 60 §752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and
[40 CFR 60 §753 (e)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
 - f) Operate the control or treatment system at all times when the collected gas is routed to the system.
[40 CFR 60 §753 (f)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
 - g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of 40 CFR 60 §753 are not met, corrective action shall be taken as specified in 40 CFR 60 §755(a)(3) through (5) or 40 CFR 60 §755(c). If corrective actions are taken as specified in 40 CFR 60 §755, the monitored exceedance is not a violation of the operational requirements of 40 CFR 60 §753.
[40 CFR 60 §753 (g)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- 7) If a positive pressure exists at the gas collection header, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under 40 CFR 60 §753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Control Officer for approval.
[40 CFR 60 §755 (a)(3)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- 8) The Permittee is not required to expand the system as required in 40 CFR 60.755(a)(3) during the first 180 days after gas collection system startup.
[40 CFR 60 §755 (a)(4)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- 9) If a well exceeds one of the operating parameters described in 40 CFR 60.755(a)(5), action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Control Officer for approval.
[40 CFR 60 §755 (a)(5)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]

- 10) For purposes of compliance with 40 CFR 60 §753(a), the Permittee shall place each well or design component as specified in the approved design plan as provided in 40 CFR 60 §752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:
 - a) 5 years or more if active; or
 - b) 2 years or more if closed or at final grade.

[40 CFR 60 §755 (b)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- 11) Except as provided in 40 CFR 60§752(b)(2)(i)(B), The Permittee seeking to comply with 40 CFR 60 §752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:
 - a) Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR 60 §755(a)(3);
 - b) Monitor nitrogen and oxygen concentration in the landfill gas on a monthly basis as provided in 40 CFR 60 §755(a)(5);
 - c) Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60 §755(a)(5).

[40 CFR 60 §756 (a)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]
- 12) Except as provided in 40 CFR 60§752(b)(2)(i)(B), the Permittee seeking to comply with 40 CFR 60 §752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:
 - a) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ± 1 percent of temperature being measured expressed in degrees Celsius or ± 0.5 degrees Celsius, whichever is greater.
 - b) A device that records flow to or bypass of the control device. The Permittee shall either:
 - (1) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
 - (2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[40 CFR 60 §756 (b)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 13) Except as provided in 40 CFR 60§752(b)(2)(i)(B), the Permittee seeking to demonstrate compliance with 40 CFR 60 §755(c) shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 60 §755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background

detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

[40 CFR 60 §756 (f)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]
[County Rule 370§302.56]

B. Operational Requirements for Fugitive Dust Sources

1) Stabilization Requirements

a) The Permittee shall not allow visible fugitive dust emissions from unpaved parking lots to exceed 20% opacity and either;

- (1) shall not allow silt loading equal to or greater than 0.33 oz/ft²;
- (2) shall not allow the silt content to exceed 8%.

[County Rule 310 §302.1][SIP Rule 310 §302.1]

b) The Permittee shall not allow visible fugitive dust emissions from unpaved Haul/Access roads to exceed 20% opacity and either,

- (1) shall not allow silt loading equal to or greater than 0.33 oz/ft²;
- (2) shall not allow the silt content to exceed 6%.

[County Rule 310 §302.2a][SIP Rule 310 §302.2a]

c) The Permittee shall, as an alternative to meeting the stabilization requirements for an unpaved haul/access road, limit vehicle trips to no more than 20 per day per road and limit vehicle speeds to no more than 15 miles per hour. If complying with subsection 302.2(b) of County Rule 310, the Permittee must include, in the Dust Control Plan, the maximum number of vehicle trips on the unpaved haul/access roads each day (i.e. number of employee vehicles, earthmoving equipment, haul trucks and water trucks)

[County Rule 310 §302.2b][SIP Rule 310 §302.2b]

d) The Permittee shall meet at least one of the standards below, as applicable, for any open areas and vacant lots or any disturbed surface areas on which no activity is occurring. Should a disturbed open area and/or vacant lot or any disturbed surface area on which no activity is occurring contain more than one type of disturbance, soil, vegetation, or other characteristics, which are visibly distinguishable, the Permittee shall test each representative surface separately for stability, in an area that represents a random portion of the overall disturbed conditions of the site, according to the appropriate test methods in Appendix C of the Maricopa County rules, and include or eliminate it from the total size assessment of disturbed surface area(s) depending upon test method results. The Permittee shall be considered in violation of Maricopa County Rule 310 if such inactive disturbed area is not maintained in a manner that meets at least one of the standards listed below, as applicable.

- (1) Maintain a visible crust;
- (2) Maintain a threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 cm/second or higher;
- (3) Maintain a flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%;

- (4) Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal or greater than 30%;
- (5) Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements;
- (6) Maintain a percent cover that is equal to or greater than 10% for non-erodible elements;
- (7) Comply with a standard of an alternative test method, upon obtaining the written approval from the Control Officer and the Administrator of the Environmental Protection Agency (EPA).

[County Rule 310 §302.3][SIP Rule 310 §302.3]

- 2) Control Measures: The Permittee shall implement control measures before, after and while conducting any dust generating operation, including during weekends, after work hours, and on holidays, in accordance with Section 304.3 and Tables 1-21 (incorporated in Appendix B of this Permit) of County Rule 310 For the purpose of these Permit Conditions, any control measure that is implemented must meet the applicable standard(s) described in County Rule 310 §§301 and 302, as determined by the corresponding test method(s), as applicable, and must achieve other applicable standard(s) set forth in County Rule 310. Failure to comply with the provision of County Rule 310 §308 (Work Practices), as applicable, and/or of an approved Dust Control Plan, is deemed a violation of this Permit.

[County Rule 310 §306][SIP Rule 310 §306]

- 3) Should any primary control measures(s) in an approved Dust Control Plan prove ineffective, the Permittee shall immediately implement the contingency control measure. If the identified contingency control measure(s) is effective to comply with all of the requirements of County Rule 310 and this Permit, the Permittee need not revise the Dust Control Plan under Section 305 of County Rule 310 and Section 23 of this permit, which may obviate the requirement of submitting a revised Dust Control Plan.

[County Rule 310 §303.3][SIP Rule 310 §303.2]

- 4) Work Practices: The Permittee shall comply with the following work practices in addition to implementing, as applicable, the control measures described in Table 1-21 in County Rule 310 and Table 1- 21 of Appendix B.:

- a) Bulk Material Hauling **Off-Site** onto Paved Areas Accessible to the Public : Notwithstanding other sections of County Rule 310 and this Permit, the Permittee shall do all of the following:
 - (1) Load all haul trucks such that the freeboard is not less than three inches;
 - (2) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/pr tailgate(s);
 - (3) Cover all haul trucks with a tarp or other suitable closure; and
 - (4) Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

- b) Bulk Material Hauling **On-Site** Within the Boundaries of the Work Site: When crossing a paved area accessible to the public while construction is underway, the Permittee shall do all of the following:
 - (1) Load all haul trucks such that the freeboard is not less than three inches; and
 - (2) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
 - (3) Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site. Examples of trackout control devices are described in Table 17 of Appendix B.
- c) Unpaved Haul/Access Roads: The Permittee shall implement 1 or more control measure(s) described in Table 3 of Appendix B (Unpaved Haul/Access Roads) before maintaining unpaved haul/access roads.
- d) Open Storage Piles:

For the purpose of this permit, an open storage pile is any accumulation of bulk material with a 5% or greater silt content which in any one point attains a height of three feet and covers a total surface area of 150 square feet or more. Silt content shall be assumed to be 5% or greater unless a person can show, by testing in accordance with ASTM Method C136-96A or other equivalent method approved in writing by the Control Officer and the Administrator of EPA, that the silt content is less than 5%.

 - (1) Prior to and/or while conducting stacking, loading, and unloading operations, comply with one of the following work practices:
 - (a) Spray material with water, as necessary; or
 - (b) Spray material with a dust suppressant other than water, as necessary.
 - (2) When not conducting stacking, loading, And unloading Operations, comply with one of the following work practices:
 - (a) Cover open storage piles with tarps, plastic, or other material to prevent wind from removing the coverings; or
 - (b) Apply water to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98, or other equivalent methods approved by the Control Officer and the Administrator of EPA. For areas which have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91(1998) or other equivalent approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content; or
 - (c) Meet one of the stabilization requirements described in Section 302.3 of County Rule 310 ; or
 - (d) Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%. If implementing this subsection, must also implement subsection (b) or (c) above.

[County Rule 310 §308 and Table 1] [SIP Rule 310 §308]

- e) Spillage, Carry-Out, Erosion, and/or Trackout: The Permittee shall do all of the following:
 - (1) Install, maintain, and use a suitable trackout control device (examples of trackout control devices are described in Table 17 of Appendix B) that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site at all exits onto paved areas accessible to the public from both of the following
 - (a) All work sites with a disturbed surface area of two acres or larger; and.
 - (b) All work sites where 100 cubic yards of bulk materials are hauled on-site and/or off-site per day.
 - (2) Cleanup spillage, carry-out, erosion, and/or trackout on the following time-schedule:
 - (a) Immediately, when spillage, carry-out, and/or trackout extends a cumulative distance of 50 linear feet or more; or
 - (b) At the end of the workday, for all other spillage, carry-out, erosion, and/or trackout
- f) Soil Moisture: If water is the chosen control measure in an approved Dust Control Plan, the Permittee shall operate a water application system on-site (e.g., water truck, water hose) while conducting any earthmoving operations on disturbed surface areas 1 acre or larger, unless a visible crust is maintained or the soil is sufficiently damp to prevent loose grains of soil from becoming dislodged.
- g) Easements, Rights-of-Way, and Access Roads for Utilities (Electricity, Natural Gas, Oil, Water and Gas Transmission) Associated with Sources that have a Non-Title V Permit, a Title V Permit, and/or a General Permit under the County Rules: The Permittee shall do at least one of the following:
 - (1) Restrict vehicular trips to no more than 20 per day per road; or
 - (2) Implement control measures as described in Table 3 of Appendix B (Unpaved Haul/Access Roads).
- h) Weed Abatement by Discing or Blading: The Permittee shall comply with all of the following weed abatement procedures by discing or blading:
 - (1) Apply water before weed abatement by discing or blading occurs; and
 - (2) Apply water while weed abatement by discing or blading is occurring; and
 - (3) Either:
 - (a) Pave, apply gravel, apply water, or apply a suitable dust suppressant, in compliance with Section 302.3 of County Rule 310 or Section 19.B.1)d) of this permit.
 - (b) Establish vegetative ground cover in sufficient quantity, in compliance with Section 302.3 or County Rule 310 or Section 19.B.1)d) of this permit, after weed abatement by discing or blading occurs.

C. Operational Requirements for Internal Combustion Engines

- 1) The Permittee shall limit the operation of each emergency generator and water pump to no more than 500 hours per any twelve consecutive months
[County Rule 210 §302.1b]
- 2) The emergency generator(s) shall not be used for peak shaving. The emergency generator(s) shall only be used for the following purposes:
 - a) For power when normal power service fails from the serving utility or if on-site electrical transmission or onsite power generation equipment fails;
 - b) Emergency pumping of water resulting from a flood, fire, lightning strikes, police action, or for any other essential public services which affect the public health and safety;
 - c) Reliability-related activities such as engine readiness, calibration, or maintenance or to prevent the occurrence of an unsafe condition during electrical system maintenance;
 - d) To operate standby emergency water pumps for fire control that activate when sensors detect low water pressure.
[County Rule 324§104][County Rule 210§302.1b]
- 3) The Permittee may not use any fuel that contains more than 0.05 percent sulfur by weight, alone or in combination with other fuels, with the following exception: existing supplies in storage as of October 22, 2003 of any fuel containing greater than 0.05 percent of sulfur by weight may be used by the owner or operator until April 22, 2005. This usage shall be reported to the Control Officer along with the dates of usage.
[County Rule 324§301.1][locally enforceable only]
- 4) The Permittee shall not operate the emergency generator(s) and water pump(s) unless its cumulative run time meter is installed and working properly.
[County Rule 210§302.1b]

D. Operational Requirements for Gasoline Storage Tanks Greater than 250 Gallons

- 1) The Permittee shall limit gasoline deliveries to less than 120,000 gallons in any 12 consecutive calendar months.
[County Rule 353 §305.2.a][SIP Rule 353 §303.2]
- 2) Basic Tank Integrity: No vapor or liquid escapes are allowed through a dispensing tank's outer surfaces, nor from any of the joints where the tank is connected to pipe(s), wires or other system.
 - a) VOC Emissions Standard:
Tanks and their fittings shall be vapor tight except for the outlet of a pressure/vacuum relief valve on a dispensing tank's vent pipe. Specifically, this means that at a probe tip distance of 1 inch (2.5 cm) from a surface, no vapor escape shall exceed 1/5 of the lower explosive limit. This applies to tanks containing gasoline regardless of whether they are currently being filled, and to caps and other tank fittings.

[County Rule 353 §301.1(b)][locally enforceable only]

- b) Leakage Limits –Liquid Leaks and Spills:
 - (1) Gasoline storage and receiving operations shall be leak free. Specifically, no liquid gasoline escape of more than 3 drops per minute is allowed. This includes leaks through the walls of piping, fittings, fill hose(s), and vapor hose(s).
 - (2) There shall be no excess gasoline drainage from the end of a fill hose or a vapor hose. Specifically, not more than 2 teaspoonful of gasoline shall be lost in the course of a connect or disconnect process.
[County Rule 353 §301.2][locally enforceable only]
- c) Spill Containment Equipment: The entire spill containment system including gaskets shall be kept vapor-tight.
 - (1) The Spill Containment Receptacle:
 - (a) The outer surface of the spill containment receptacle shall have no holes or cracks and shall allow no vapors to pass from the dispensing tank through it to the atmosphere.
 - (b) Spill containment receptacles shall be kept clean and free of foreign material at all times.
 - (c) Spill containment receptacles shall be inspected at least weekly. Records of inspection and cleaning shall be kept in accordance with the recordkeeping requirements of these permit conditions.
 - (2) If the spill containment is equipped with a passageway to allow material trapped by the containment system to flow into the interior of the dispensing tank:
 - (a) The passageway shall be kept vapor tight at all times, except during the short period when a person opens the passageway to immediately drain material trapped by the containment system into the tank.
 - (b) The bottom of the receptacle shall be designed and kept such that no puddles of gasoline are left after draining through the passageway has ceased.
 - (3) The Permittee is responsible for assuring that before a delivery vessel leaves the premises after a delivery:
 - (a) Any gasoline in a dispensing tank's spill containment receptacle has been removed.
 - (b) Any gasoline that a person has taken out of a spill receptacle, as a free liquid or as absorbed into/onto other material removed from the receptacle, shall be contained in such a way that VOC emission is prevented; disposal in conformance with applicable hazardous waste rules is sufficient to meet this requirement.
 - (c) Any plunger/stopper assembly is unimpeded and sealing correctly.

- (4) Criteria Of Violation/Exceedance For Spill-Containment Receptacles: A reading on a CGD or OVA exceeding 1/5 LEL (10,000 ppm as methane) is an exceedance. The procedure for performing a determination is set forth in County Rule 353§504.3.

[County Rule 353 §301.3][locally enforceable only]

3) Fill Pipe Requirements

- a) Each fill-line into a stationary dispensing tank shall be equipped with a permanent submerged fill pipe that has a discharge opening which is completely submerged when the liquid level is 6 inches above the tank bottom.

- (1) Threads, gaskets, and mating surfaces of the fill pipe assembly shall be designed and maintained tight. There shall be no liquid or vapor leakage at the joints of the assembly.

- (2) The Permittee is responsible to assure that external fittings of a fill pipe assembly shall be inspected weekly to assure that cap, gasket, and piping are intact and are not loose.

- (a) A record of the inspection shall be made in accordance with the recordkeeping requirements of these permit conditions.

- (b) The Permittee shall act to prevent driver/deliverers from connecting the delivery hose coupling to a fill pipe coupling with so much twisting force that the fill pipe assembly is loosened. One method of complying is to have a CARB-certified swivel coupling as part of the fill pipe assembly (reference subsection 503.4 for CARB).

[County Rule 353 §302.1][SIP Rule 353 §301.1]

- b) Fill Pipe Caps:

- (1) The cap shall have a securely attached, intact gasket.

- (2) The cap and its gasket shall always function properly, latch completely so that it cannot then be easily twisted by hand, and have no structural defects.

- (3) The cap of a gasoline fill pipe shall always be fastened securely on the fill pipe except immediately before, during, and immediately after:

- (a) "Sticking" the tank to measure gasoline depth.

- (b) Delivering gasoline into the tank.

- (c) Doing testing, maintenance or inspection on the gasoline/vapor system.

- (4) Do not unfasten or remove a fill pipe cap unless every other fill pipe is either securely capped or connected to a delivery hose, except as otherwise needed for testing, maintenance, or inspection.

[County Rule 353 §302.2][locally enforceable only]

- c) Restrictions on Multiple Fill Pipes

The tank shall not be equipped with more than one fill pipe.

[County Rule 353§302.3][locally enforceable only]

- d) Fill Pipe Obstructions:

- (1) Any type of screen and/or other obstructions in fill pipe assemblies shall be permanently removed by November 1, 1999, unless it is specifically

allowed by an Air Pollution Permit or is CARB-certified, as referenced in subsection 503.4.

- (2) A screen or other obstruction, allowed by Air Pollution Permit or CARB, shall be temporarily removed by the Permittee prior to inspection by the Control Officer to allow measurements pursuant to this rule.

[County Rule 353 §302.4][locally enforceable only]

- e) Overfill Protection Equipment: Overfill prevention equipment shall be vapor tight to the atmosphere. Any device mounted within the fill pipe shall be so designed and maintained that no vapor from the vapor space above the gasoline within the tank can penetrate into the fill pipe or through any of the fill pipe assembly into the atmosphere.

[County Rule 353 §302.5][locally enforceable only]

E. Facility-Wide Requirements

- 1) Odors: The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.

[County Rule 320 § 300][SIP Rule 32A]

- 2) **Material Containment:** Materials including, but not limited to, solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices or equipment shall be mandatory.
[County Rule 320 §302][SIP Rule 32C]
- 3) **Stacks:** Where a stack, vent or other outlet is at such a level that air contaminants are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air contaminants to adjoining property.
[County Rule 320 §303] [SIP Rule 32D]
- 4) **Equipment Cleanup:** The Permittee shall not use any liquid material containing more than 10 percent volatile organic compounds for the cleanup of equipment unless:
 - a) The used cleaning liquids are collected in a container which is closed when not in use and is disposed of in a manner such that volatile organic compounds are not emitted into the atmosphere, or
 - b) The equipment is disassembled and cleaned in a solvent vat which is closed when not in use, or cleaning is done by other methods, approved in writing by the Control Officer, which limit evaporation.[County Rule 330 §305][locally enforceable only]
- 5) **VOC Containment and Disposal:** The Permittee shall not store, discard, or dispose of VOC or VOC-containing material in a way intended to cause or to allow the evaporation of VOC to the atmosphere. Reasonable measures shall be taken to prevent such evaporation, which include but are not limited to the following:
 - a) All materials from which VOC can evaporate, including fresh solvent, waste solvent and solvent-soaked rags and residues, shall be stored in closed containers when not in use; and
 - b) Such containers one gallon and larger shall be legibly labeled with their contents, and
 - c) Records of the disposal/recovery of such materials shall be kept. Records of hazardous waste disposal shall be kept in accordance with hazardous waste disposal statutes.[County Rule 330 §306][locally enforceable only]
- 6) **Operation and maintenance and SSM Plan Requirements**
 - a) **Operation and maintenance requirements**
 - (1) At all times, including periods of startup, shutdown, and malfunction (SSM), the Permittee must operate and maintain the landfill, including the flare and associated monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of SSM, this general duty to minimize emissions requires that the Permittee reduce emissions from the landfill to the greatest extent which is consistent with safety and good air pollution control practices.

The general duty to minimize emissions during a period of SSM does not require the Permittee to achieve emission levels that would be required by 40 CFR 63 Subpart AAAA through 40 CFR 60 Subpart WWW at other times if this is not consistent with safety and good air pollution control practices, nor does it require the Permittee to make any further efforts to reduce emissions if levels required by 40 CFR 63 Subpart AAAA through 40 CFR 60 Subpart WWW have been achieved. Determination of whether such acceptable operation and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the SSM plan required in paragraph b) of this section), review of operation and maintenance records, and inspections.

- (2) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the SSM plan required in paragraph b) of this section. To the extent that an unexpected event arises during a SSM, the Permittee must comply by minimizing emissions during such a SSM event consistent with safety and good air pollution control practices.
- (3) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

[40 CFR 63§6(e)(1) and 40 CFR 63 Subpart AAAA Table 1]

[County Rule 370 §302.1][County Rule 370§302.56]

b) SSM Plan Requirements

- (1) Before commencing operation of the collection and control system, the Permittee must develop and implement a written SSM plan that describes, in detail, procedures for operating and maintaining the source during periods of SSM, and a program of corrective action for malfunctioning process and flare and monitoring equipment. During periods of SSM, the Permittee must operate and maintain the landfill, including the flare and monitoring equipment, in accordance with the procedures specified in the SSM plan developed. A copy of the SSM plan must be maintained on site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of Subpart AAAA of 40 CFR Part 63.

[40 CFR 63 §6(e)(3) and 1960][40 CFR 63 Subpart AAAA Table 1]

[County Rule 370 §302.1][40 CFR 63§1955(b)]

- (2) The Permittee may periodically revise the SSM plan for the landfill as necessary to satisfy the requirements of 40 CFR 63 or to reflect changes in equipment or procedures at the landfill. Unless the Control Officer provides otherwise, the Permittee may make such revisions to the SSM plan without prior approval. However, each such revision to a SSM plan must be reported in the semiannual SSM report. If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time the Permittee developed the plan, the Permittee must revise the SSM plan within 45 days after the event to include detailed procedures for operating

and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of the landfill or the flare and monitoring equipment. In the event that the Permittee makes any revision to the SSM plan which alters the scope of the activities at the source which are deemed to be a SSM, or otherwise modifies the applicability of any requirement in a standard established under 40 CFR 63, the revised plan shall not take effect until after the Permittee has provided a written notice describing the revision to the Control Officer.

[40 CFR 63 §6(e)(3) and 40 CFR 63 Subpart AAAA Table 1]
[County Rule 370 §302.1]

- (3) Any revisions made to the SSM plan in accordance with the procedures established by Part 63 and this Permit shall not be deemed to constitute permit revisions under part 70. Moreover, none of the procedures specified in the SSM plan shall be deemed to fall within the permit shield provision in section 504(f) of the Clean Air Act.

[40 CFR 63§6(e)(3) and 40 CFR 63 Subpart AAAA Table 1]
[County Rule 370 §302.1]

F. Specifications for Active Collection Systems

- 1) To comply with 40 CFR 60.752(b)(2)(i) and Rule 360§302.56, the Permittee shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Control Officer and the administrator as provided in 40 CFR 60.752(b)(2)(i)(C) and (D).
 - a) The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.
 - b) The sufficient density of gas collection devices determined in 40 CFR 60.759(a)(1) shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.
 - c) The placement of gas collection devices determined in 40 CFR 60.759(a)(1) shall control all gas producing areas, except as provided by 40 CFR 60.759(a)(3)(i) and 40 CFR 60.759(a)(3)(ii).
 - (1) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under 40 CFR 60.758(d). The documentation shall provide the nature, date of deposition, location, and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Control Officer upon request.
 - (2) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Control Officer upon request. A separate NMOC emissions

estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$$Q_i = 2kL_oM_i(e^{-kt_i})(C_{NMOC})(3.6 \times 10^{-9})$$

where:

Q_i = NMOC emission rate from the i^{th} section, megagrams per year

k = Methane generation rate constant, year^{-1}

L_o = Methane generation potential, cubic meters per megagram solid waste

M_i = Mass of the degradable solid waste in the i^{th} section, megagram

t_i = Age of the solid waste in the i^{th} section, years

C_{NMOC} = Concentration of non-methane organic compounds, parts per million by volume

3.6×10^{-9} = Conversion factor

- (3) The values for k and C_{NMOC} determined in field testing shall be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k , L_o , and C_{NMOC} provided in 40 CFR 60.754(a)(1) or the alternative values from 40 CFR 60.754(a)(5) shall be used. The mass of non-degradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the non-degradable material is documented as provided in 40 CFR 60.759(a)(3)(i).

[40 CFR 60 §759(a)][County Rule 360 §301.74]

[40 CFR 63 §1955(a)(1)][County Rule 370 §302.56]

- 2) To comply with 40 CFR 60.752(b)(2)(i)(A), County Rule 360§301.74, and County Rule 370§302.56, the Permittee shall construct the gas collection devices using the following equipment or procedures:
- a) The landfill gas extraction components shall be constructed of polyvinylchloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices, such as wells and horizontal collectors, shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.
 - b) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short-circuiting of air into the cover

or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

- c) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings, and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

[40 CFR 60 §759(b)][County Rule 360 §301.74]

[40 CFR 63 §1955(a)(1)][County Rule 370 §302.56]

- 3) To comply with 40 CFR 60.752(b)(2)(i)(A), the Permittee shall convey the landfill gas to a control system in compliance with 40 CFR 60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment in accordance with 40 CFR 60.755(a)(1).

[40 CFR 60 §759(c) and §759(c)(2)][County Rule 360 §301.74]

[40 CFR 63 §1955(a)(1)][County Rule 370 §302.56]

G. Operational Requirements for the Flares

- 1) Flares shall be designed and operated in accordance with applicable requirements contained in 40 CFR 60 §18 for the type of flare device used at the landfill.
- 2) Flares shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60 §18(f).
- 3) Flares used to comply with the provisions of 40 CFR 60 §18 shall be operated at all times when emissions may be vented to them.

[40 CFR 60 §18][40 CFR 60 §18(c)(2)][40 CFR 60 §18(e)][County Rule 360 §301.1]

20. MONITORING AND RECORDKEEPING REQUIREMENTS

A. Monitoring and Recordkeeping for Hydrogen Sulfide

If the Division or the Permittee logs more than three off-site odor complaints pursuant to the odor logging section of these permit conditions (20.F.) during any four consecutive weeks, the Permittee shall conduct property line monitoring for H₂S within 2 business days of receiving the third complaint or within 2 business days of being notified of the third complaint by the Division.

The Permittee shall notify the Division, Attn: Emission Testing Supervisor, by telephone or in writing at least 24 hours in advance of conducting the monitoring.

The monitoring shall be performed using a Jerome 631-X (or equivalent approved by the Division) portable hydrogen sulfide gas analyzer with the capability to detect H₂S at concentrations in the parts per billion by volume (ppb_v) range. The analyzer shall be calibrated and operated in accordance with the manufacturer's operating instruction book.

Monitoring shall be conducted at a minimum of 12 locations of equal spacing along the property line of the landfill (approximately every ½ mile) and shall be collected from between three and six feet above the ground surface. The monitoring period for each location

shall be a period of ten minutes and the period shall begin as soon as possible after the tester arrives at the sampling location.

When the tester arrives at a monitoring location, three readings shall be taken at roughly five minute intervals.

If the property line monitoring shows an average H₂S concentration of 0.03 ppmv or higher at any of the monitoring locations the Permittee shall implement a plan to control the H₂S emissions within seven calendar days. Upon implementation of the odor control plan, the Permittee shall monitor property line concentrations weekly until three weeks of data indicate the H₂S emissions have been controlled to 0.03 ppmv or less. The Permittee shall submit to the Division, Attn: Title V Compliance Supervisor, a report of complaints and of actions taken to implement the odor control plan within 14 calendar days of initial sampling. The control officer reserves the right to require additional monitoring or testing for odoriferous compounds that might reasonably be expected to be emitted from the landfill.

[County Rule 200 §309][County Rule 320 §304]

B. Monitoring and Recordkeeping Before Installation of Collection and Control System

- 1) The Permittee shall comply with 40 CFR 60.752(b)(2) or calculate an NMOC emission rate for the landfill using the procedures specified in subsections 2) through 5). The NMOC emission rate shall be recalculated annually, except as provided in 40 CFR 60.757(b)(1)(ii).
 - a) If the calculated NMOC emission rate is less than 50 megagrams per year, the Permittee shall:
 - (1) Submit an annual emission report to the Control Officer, and
 - (2) Recalculate the NMOC emission rate annually using the procedures specified in 40 CFR 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.
 - b) If the NMOC emission rate, upon recalculation required in subsection (2) is equal to or greater than 50 megagrams per year, the Permittee shall install a collection and control system in compliance with the requirements of this permit.
 - c) If the landfill is permanently closed, a closure notification shall be submitted to the Control Officer as provided for in 40 CFR 60 §757(d).

[40 CFR 60 §752 (b)(1)][County Rule 360 §301.74]

[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

- 2) The Permittee shall calculate the NMOC emission rate using either the equation provided in 40 CFR 60 §754(a)(1)(i) or the equation provided in 40 CFR 60 §754(a)(1)(ii). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in 40 CFR 60 §754(a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in 40 CFR 60 §754(a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative site, the k value to be used is 0.02 per year.

- a) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known:

$$M_{NMOC} = \sum_{i=1}^n 2kL_o M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year

$k = 0.02$, methane generation rate constant, year⁻¹

$L_o = 170$, methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} section, megagrams

t_i = age of the i^{th} section, years

$C_{NMOC} = 4000$, concentration of NMOC, parts per million by volume as hexane

3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation of the nature and amount of such wastes is maintained.

- b) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown:

$$M_{NMOC} = 2L_o R (e^{-kc} - e^{-kt}) C_{NMOC} (3.6 \times 10^{-9}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

R = average annual acceptance rate, megagrams per year

$k = 0.02$, methane generation rate constant, year⁻¹

t = age of landfill, years

$C_{NMOC} = 4000$, concentration of NMOC, parts per million by volume as hexane

c = time since closure, years; for active landfill $c = 0$ and $e^{-kc} = 1$

3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R , if the documentation of the nature and amount of such wastes is maintained.

[40 CFR 60 §754(a)(1)][County Rule 360 §301.74]

[40 CFR 63 §1955(a)(1)][County Rule 370 §302.56]

[40 CFR 60 §754 (a)(1)][County Rule 360 §301.74]

[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

- 3) Tier 1.

The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

- a) If the NMOC emission rate calculated is less than 50 megagrams per year, then the Permittee shall submit an emission rate report as provided in 40 CFR 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually as required under §60.752(b)(1) and this permit.
- b) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2) or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the Tier 2 procedures provided in the following section.

[40 CFR 60 §754 (a)(2)][County Rule 360 §301.74]

[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

4) Tier 2.

The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of Appendix A of this part. Method 18 of Appendix A of this part may be used to analyze the samples collected by the Method 25 or 25C sampling procedure. Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If using Method 18, the Permittee must identify all compounds in the sample and, as a minimum, test for those compounds published in the most recent Compilation of Air Pollutant Emission Factors (AP-42), minus carbon monoxide, hydrogen sulfide, and mercury. As a minimum, the instrument must be calibrated for each of the compounds on the list. Convert the concentration of each Method 18 compound to C_{NMOC} as hexane by multiplying by the ratio of its carbon atoms divided by six. If more than the required number of samples are taken, all samples must be used in the analysis. The Permittee must divide the NMOC concentration from Method 25 or 25C of Appendix A of this part by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe.

- a) The Permittee shall recalculate the NMOC mass emission rate using the equation provided in this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in subsection B.1) of this permit condition.
- b) If the resulting mass emission rate calculated using the site- specific NMOC concentration is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine the site-specific methane generation rate constant by performing a Tier 3 analysis and recalculate the NMOC emission rate using the site- specific methane generation rate using the procedure specified in subsection B.4).
- c) If the resulting NMOC mass emission rate is less than 50 megagrams per year, the Permittee shall submit a periodic estimate of the emission rate report as provided in 40 CFR 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.

[40 CFR 60 §754 (a)(3)][County Rule 360 §301.74]

[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

- 5) Tier 3.
The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of 40 CFR 60. The Permittee shall estimate the NMOC mass emission rate using the equation provided in this section and using a site-specific methane generation rate constant k , and the site-specific NMOC concentration as determined through Tier 2 instead of the default values provided in this section. The Permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.
- a) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the Permittee shall comply with 40 CFR 60.752(b)(2).
 - b) If the NMOC mass emission rate is less than 50 megagrams per year, then the Permittee shall submit a periodic emission rate report as provided in 40 CFR 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in 40 CFR 60.757(b)(1) using the equation provided in this section and using the site-specific methane generation rate constant and NMOC concentration obtained through Tier 2. The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.
[40 CFR 60 §754 (a)(4)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 6) Alternative Methods: The Permittee may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the Tier 2 and Tier 3 methods if the method has been approved by the Administrator and the Control Officer.
[40 CFR 60 §754 (a)(5)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

C. Monitoring and Recordkeeping for the Collection and Control System

- 1) After the installation of a collection and control system in compliance with 40 CFR 60 §755, the Permittee shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in 40 CFR 60 §752(b)(2)(v), using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

Q_{LFG} = flow rate of landfill gas, cubic meters per minute

C_{NMOC} = NMOC concentration, parts per million by volume as hexane

- a) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40 CFR 60.
- b) The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of Appendix A of 40 CFR Part 60. If using Method 18, the minimum list of compounds to be tested shall be those published in the most

recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The Permittee shall divide the NMOC concentration from Method 25 C of Appendix A of 40 CFR Part 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

- c) The Permittee may use another method to determine landfill gas flow and NMOC concentration if the method has been approved by the Control Officer.

[40 CFR 60 §754 (b)][County Rule 360 §301.74]

[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

- 2) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the following methods shall be used to determine whether the gas collection system is in compliance with 40 CFR 60 §752(b)(2)(ii).

- a) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 40 CFR 60 §752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_o kinetic factors should be those published in the most recent compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Control Officer. If k has been determined as specified in 40 CFR 60 §754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

- (1) For sites with unknown year-to-year solid waste acceptance rate:

$$Q_M = 2 L_o R (e^{-kc} - e^{-kt})$$

where,

Q_M = maximum expected gas generation flow rate, cubic meters per year

L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

t = age of the landfill at equipment installation plus the time the Permittee intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

c = time since closure, years (for an active landfill $c = 0$ and $e^{-kc} = 1$)

- (2) For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i})$$

where,

Q_M = maximum expected gas generation flow rate, cubic meters per year

k = methane generation rate constant, year⁻¹

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} section, megagrams

t_i = age of the i^{th} section, years

- (3) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in paragraphs 2)(a)(1) and (2) of this permit condition. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in paragraphs 2)(a)(1) and (2) of this permit condition or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.
 - b) For the purpose of determining sufficient density of gas collectors for compliance with 40 CFR 60 §752(b)(2)(ii)(A)(2), the Permittee shall design a system of vertical wells, horizontal collectors or other collection devices, satisfactory to the Control Officer, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.
 - c) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 60 §752(b)(2)(ii)(A)(3), the Permittee shall measure gauge pressure in the gas collection header at each individual well, monthly.
 - d) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR 60 §753(c).
 - e) To demonstrate compliance with 40 CFR 60 §752(b)(2)(ii)(A)(4), County Rule 360§301.74, and County Rule 370§302.56, through the use of a collection system not conforming to the specifications provided in 40 CFR 60 §759, the Permittee shall provide information satisfactory to the Control Officer as specified in 40 CFR 60 §752(2)(i)(C) demonstrating that off-site migration is being controlled.
[40 CFR 60 §755 (a)(1), (2), (3), (5), and (6)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 3) The following procedures shall be used for compliance with the surface methane operational standard as provided in 40 CFR 60 §753(d).
- a) After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) of 40 CFR 60 §755.
 - b) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
 - c) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of this part, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.
 - d) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in 40

CFR60 §755(c)(4)(i) through (v) shall be taken. As long as the specified actions are taken the exceedance is not a violation of the operational requirements of 40 CFR 60 §753(d).

- (1) The location of each monitored exceedance shall be marked and the location recorded.
 - (2) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of reach exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.
 - (3) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in 40 CFR60 §755(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in 40 CFR60 §755(c)(4)(v) has been taken.
 - (4) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in 40 CFR60 §755(c)(4)(ii) or (iii) shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in 40 CFR60 §755(c)(4)(iii) or (v) shall be taken.
 - (5) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Control Officer for approval.
- e) The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.
- [40 CFR 60 §755 (c)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 4) The Permittee seeking to comply with the provisions in 40 CFR60 §755(c) in the above permit conditions, shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices;
- a) The portable analyzer shall meet the instrumentation specifications provided in section 3 of Method 21 of appendix A of 40 CFR 60 , except that “methane” shall replace all references to VOC.
 - b) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
 - c) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of 40 CFR 60 , the instruments evaluation procedures of section 4.4 of Method 21 of appendix A of 40 CFR 60 shall be used.

- d) The calibration procedures provided in section 4.2 of Method 21 of appendix A of 40 CFR 60 shall be followed immediately before commencing a surface monitoring survey.

[40 CFR 60 §755 (d)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 5) The provisions of 40 CFR 60 Subpart WWW apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

[40 CFR 60 §755 (e)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 6) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee of an MSW landfill subject to the provisions of 40 CFR 60 §752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report for which triggered 40 CFR 60 §752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

[40 CFR 60 §758(a)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- 7) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs (b)(1) through (b)(4) of 40 CFR 60 §758 as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.
 - a) Where the Permittee is subject to the provisions of 40 CFR 60 Subpart WWW seeks to demonstrate compliance with 40 CFR 60 §752(b)(2)(ii):
 - (1) The maximum expected gas generation flow rate as calculated in 40 CFR 60 §755(a)(1). The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Control Officer.
 - (2) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60 §759(a)(1).
 - b) Where the Permittee is subject to the provisions of 40 CFR 60 Subpart WWW seeks to demonstrate compliance with 40 CFR 60 §752(b)(2)(iii) through the use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts;
 - (1) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.
 - (2) The percent reduction of NMOC determined and specified in 40 CFR 60 §752(b)(2)(iii)(B) achieved by the control device.

[40 CFR 60 §758 (b)(1) and (2)] [County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)] [County Rule 370§302.56]

- 8) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 60 §756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.
[40 CFR 60 §758(c)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- a) The following constitutes an exceedance that shall be recorded and reported under 40 CFR 60 §757(f):
For enclosed combustors with design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60 §752(b)(2)(iii) was determined.
[40 CFR 60 §758(c)(1)(i)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- b) The Permittee subject to the provisions of 40 CFR 60 §758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections or car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60 §756.
[40 CFR 60 §758(c)(2)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]
- c) When these Permit conditions allow the Permittee to comply with the provisions of Subpart WWW of 40 CFR Part 60 by use of an open flare or equivalent control device, the Permittee shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 60 §756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.
[40 CFR 60 §758(c)(4)][County Rule 360 §301.74]
[40 CFR 63 §1955(a)(1)][County Rule 370 §302.56]
- 9) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee subject to the provisions of 40 CFR 60 §758 shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.
- a) The Permittee subject to the provisions of 40 CFR 60 §758 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under 40 CFR 60 §755(b).
- b) The Permittee subject to the provisions of 40 CFR 60 §758 shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in 40 CFR 60 §759(a)(3)(i), as well as any non-productive areas excluded from collection as provided in 40 CFR 60 §759(a)(3)(ii).
[40 CFR 60 §758(d)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

- 10) Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee subject to the provisions of 40 CFR 60 §§ 750 through 759 shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60 §753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.
[40 CFR 60 §758(e)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

D. Monitoring and Recordkeeping for Visible Emissions

- 1) The Permittee shall weekly conduct a facility walk-through and observe visible emissions from the flares, emergency generator(s), and water pump(s).
[County Rules 300, 210 §302.1c]
- 2) The Permittee shall log the following information for all visible emissions observations and Method 9 opacity readings required by this permit:
 - a) The date and time the visible emissions observation or Method 9 opacity reading was taken;
 - b) The name of the observer;
 - c) Whether or not visible emissions were present;
 - d) If visible emissions are present and the flares, emergency generator(s), or water pump(s) are operating in a mode other than their normal operating conditions, such as startup or shutdown, a description of the operating conditions at the time that the opacity is observed;
 - e) The opacity determined by a Method 9 opacity reading, if a Method 9 reading is required by these permit conditions;
 - f) If applicable, a description of any corrective action(s) taken, including the date of such action(s); and
 - g) Any other related information.
[County Rule 300] [County Rule 210 §302.1]
- 3) If visible emissions, other than uncombined water, are observed being discharged into the ambient air from the flares, emergency generator(s), or water pump(s), the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air from the flares, emergency generator(s), or water pump(s) using the techniques specified in EPA Reference Method 9.

If the Permittee has not received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of visible emissions, the initial Method 9 opacity reading shall be taken within three (3) days of observing visible emissions. If the Permittee has received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of emissions, the initial Method 9 opacity reading shall be taken within one (1) day of observing visible emissions. If the flares, emergency generator(s), or water pump(s) are not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next day that the flares, emergency generator(s), or water pump(s) are in

operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the flares, emergency generator(s), or water pump(s) while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the flares, emergency generator(s), or water pump(s) are in their standard mode of operation in accordance with the following schedule:

- a) Daily:
 - (1) Except as provided in the paragraph entitled "Cease Follow-up Method 9 Opacity Monitoring" of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the flares, emergency generator(s), or water pump(s) are operating until a minimum of 14 daily Method 9 readings have occurred.
 - (2) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with the paragraph entitled "Weekly" of this Permit Condition.
- b) Weekly:
 - (1) If the permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the flares, emergency generator(s), or water pump(s) are operated.
 - (2) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with the paragraph entitled "Daily" of this Permit Condition.
 - (3) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of the paragraph entitled "Cease Follow-up Method 9 Opacity Monitoring" of this Permit Condition are met.
- c) Cease Follow-up Method 9 Opacity Monitoring:

Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the flares, emergency generator(s), or water pump(s), while in their standard mode of operation, have no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure. Method 9 opacity readings shall resume upon discovery of opacity emissions.

[County Rule 210 §302.1c]

3) Opacity Readings

- a) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.

[40 CFR 60.11.b][County Rule 300 §501]

- b) Opacity of visible emissions from intermittent sources as defined by County Rule 300§201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 24 consecutive readings shall be required at 15-second intervals for the averaging time.

[County Rule 300 §502] [locally enforceable only]

E. Monitoring and Recordkeeping for Dust Generating Activities

- 1) The Permittee shall keep a daily written log recording the actual application or implementation of the control measures delineated in the approved Dust Control Plan (including records on any street sweeping, water applications, and maintenance of trackout control devices, gravel pads, fences, wind barriers, and tarps). Upon verbal or written request by the Control Officer, the log or the records and supporting documentation shall be provided within 48 hours, excluding weekends. If the Control Officer is at the site where requested records are kept, records shall be provided without delay.

[County Rule 310 §502] [SIP Rule 310 §502]

- 2) Copies of approved Dust Control Plans, control measures implementation records, and all supporting documentation shall be retained at least five years from the date such records are established.

[County Rule 310 §503] [SIP Rule 310 §503]

- 3) The following test methods shall be followed :
 - a) Dust Generating Operations: Opacity observations of a source engaging in dust generating operations shall be conducted in accordance with Appendix C, Section 3 of the Maricopa County Rules (Time Averaged Methods of Visual Opacity Determination of Emissions from Dust Generating Operations) except opacity observations for intermittent sources shall require 12 rather than 24 consecutive readings at 15-second intervals for the averaging time.
 - b) Unpaved parking lot: Opacity Observations of any unpaved parking lot shall be conducted in accordance with Appendix C, Section 2.1 of the Maricopa County Rules (Test Methods for Stabilization for Unpaved Roads and Unpaved Parking Lots).
 - c) Unpaved Haul/Access Road: Opacity observations of any unpaved haul/access road (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with Appendix C, Section 2.1 of the Maricopa County Rules (Test methods for Stabilization-for unpaved Roads and Unpaved Parking Lots).

[County Rule 310 §501.1, Appendix C]
[SIP Rule 310 §501.1, Appendix C]
 - d) Unpaved parking lot: Stabilization observations for unpaved parking lots shall be conducted in accordance with Appendix C, Section 2.1 (Test Methods for Stabilization-For Unpaved Roads and Unpaved Parking Lots) of the Maricopa County Rules. When more than 1 test method is permitted for a determination, an exceedance of the limits established in County Rule 310 determined by any of the applicable test methods constitutes a violation of County Rule 310.
 - e) Unpaved Haul/Access Road: Stabilization observations for unpaved haul/access roads (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with Appendix C, Section 2.1 (Test methods for Stabilization-for Unpaved Roads and Unpaved Parking Lots) of the County Rules. When more than 1 test method is

permitted for a determination, an exceedance of the limits, established in Rule 310, determined by any of the applicable test methods constitutes a violation of County Rule 310.

- f) Open Area and Vacant Lot or Disturbed Surface Area: Stabilization observations for an open area and vacant lot or any disturbed surface area on which no activity is occurring (whether at a work site that is under construction or at a work site that is temporarily or permanently inactive) shall be conducted in accordance with at least one of the techniques described in County Rule 310 §501.2c.(1) through (7), as applicable. The Permittee shall be considered in violation of County Rule 310 if such inactive disturbed surface area is not maintained in a manner that meets at least 1 of the standards described in subsection 302.3 of County Rule 210, as applicable.

[County Rule 310 §501.2, Appendix C]

[SIP Rule 310 §501.2, Appendix C]

F. Odor Log

The Permittee shall maintain a log of complaints of odors detected off-site. The log shall contain a description of the complaint, date and time that the complaint was received, and if given, name and/or phone number of the complainant. The logbook shall describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken.

[County Rule 210 §302.1.c.(2)] [locally enforceable only]

[County Rule 320 §302]

G. Monitoring and Recordkeeping for the Internal Combustion Engines

- 1) The Permittee shall maintain an initial one time entry listing for the emergency generator(s) and water pump(s) listing the particular engine combustion type (compression or spark-ignition or rich or lean burn); manufacturer; model designation, rated brake horsepower, serial number, and where the engine is located on-site

[County Rule 324§ 502.1][locally enforceable only]

- 2) The Permittee shall maintain an annual engine record for the emergency generator(s) and water pump(s) that includes hours of operation and an explanation for use.

[County Rule 324§ 502.4][locally enforceable only]

- 3) If proof of the sulfur content is requested by the Control Officer, the Permittee shall submit fuel receipts, contract specifications, pipeline meter tickets or Material Safety Data Sheets (MSDS), if applicable, from the fuel supplier indicating the sulfur content of the fuel oil. In lieu of these, testing of the fuel oil for sulfur content to meet the 0.05% limit shall be permitted if so desired by the Permittee for evidence of compliance.

[County Rule 210 §302.1c(2)]

- 4) The Permittee shall keep accurate daily run time usage records for the emergency generators and water pumps showing the date the units were run, cumulative run time meter reading and daily hours of operation.

[County Rule 210 §302.1c(2)]

H. Monitoring and Recordkeeping for Gasoline Storage Tanks Greater than 250 Gallons

[County Rule 210 §302.1c(2)][County Rule 353 §502][SIP Rule 353 §502]

- 1) The Permittee shall record by the end of the following month, the total amount of gasoline received each month.
- 2) The Permittee shall cause weekly records of fill tube, vapor valve and spill containment inspection to be kept as well as records of any corrective actions and their dates. The finding of such weekly inspections shall be permanently entered in a record or logbook by the end of Saturday of the following week.
- 3) These records and any reports or supporting information required by these permit conditions or by the Control Officer shall be retained for at least 5 years.
- 4) The Permittee shall maintain records of the past 12 months in a readily accessible location and must be made available to the Control Officer without delay upon verbal or written request.

I. Monitoring and Recordkeeping for Landfill Surface VOC Emissions.

[County Rule 210 §302.1c][County Rule 241 §301]

The Permittee shall monitor for compliance with the annual VOC emission limitations of this permit by calculating the total actual VOC emissions from the landfill.

- 1) The Permittee shall semiannually calculate the VOC emissions from the landfill using the AP-42 landfill air emissions estimations procedure using the AP-42 default values for the methane generation constant (k) and the methane generation potential (L_0) for arid climates and no co-disposal of industrial solvent waste. The value of CNMOC shall be the same value used in this permit application until a site specific value for CNMOC is submitted to and approved by the Control Officer. The VOC emissions may be calculated by taking 39% of the NMOC emissions. The calculation of projected annual emissions for the next one-year period should be based on the emissions calculated for the previous six-month period, projected waste receipts, and existing and anticipated contracts.
- 2) If at any time during a calendar year the quantity of waste received at the landfill exceeds the quantity projected in the previous calendar year's emission calculations, the Permittee shall reevaluate projected emissions from the landfill for that calendar year and shall submit a revised VOC emissions report to the Division within 30 day.

J. Monitoring and Recordkeeping for VOCs (other than Landfill Surface)

[County Rule 330 §503][locally enforceable only]

The Permittee shall keep the following records for 5 years and shall make them available to the Control Officer upon request.

- 1) Current List: Maintain a current list of coatings, adhesives, makeup solvents, and any other VOC-containing materials; state the VOC content of each in pounds per gallon or grams per liter. VOC content shall be expressed less water and non-precursor compounds for materials which are not used for cleaning or cleanup.
- 2) Monthly Usage: Maintain monthly records of the amount of each coating, adhesive, makeup solvent; solvent used for surface preparation, for cleanup, and for the removal of materials, and any other VOC-containing material used.

- 3) Discarded Materials: Maintain records of the type, amount, and method of disposing of VOC-containing materials on each day of disposal.

K. SSM Recordkeeping

- 1) When actions taken by the Permittee during a SSM (including actions taken to correct a malfunction) are consistent with the procedures specified in the Permittee's SSM plan, the Permittee must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist", or other effective form of recordkeeping, that confirms conformance with the SSM plan for that event. In addition, the permittee must keep records of these events as specified in 40 CFR 63 §10(b), including records of the occurrence and duration of each SSM of operation and each malfunction of the flare and monitoring equipment. Furthermore, the Permittee shall confirm that actions taken during the relevant reporting period during periods of SSM were consistent with the SSM plan in the semiannual (or more frequent) SSM report.

[40 CFR 63 §6(e)(3)(iii) and 40 CFR 63 Subpart AAAA Table 1]
[County Rule 370 §302.1]

- 2) The Permittee shall maintain relevant records of:
 - a) The occurrence and duration of each SSM of operation (i.e., process equipment).
 - b) The occurrence and duration of each malfunction of the flare and monitoring equipment.
 - c) All information necessary to demonstrate conformance with the SSM plan when all actions taken during periods of SSM (including corrective actions to restore malfunctioning process and air pollution control equipment and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the SSM plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);
 - d) Actions taken during periods of SSM (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the Permittee's SSM plan. The facility must also record instances when the source exceeds any applicable emission limitation in 40 CFR 60 Subpart WWW during such events.

[40 CFR 63 §10(b)(2)(i), (ii), (iv) and (v) and 40 CFR 63 Subpart AAAA Table 1]
[County Rule 370 302 §1]

- 3) The Permittee must maintain at the source a current SSM plan and must make the plan available upon request for inspection and copying by the Control Officer. In addition, if the SSM plan is subsequently revised as provided in Section 19 of this permit, the Permittee must maintain at the source each previous (i.e. superseded) version of the SSM plan, and must make each such previous version available for inspection and copying by the Control Officer for a period of 5 years after revision of the plan. If at any time after adoption of a SSM plan the source ceases operation or is otherwise no longer subject to 40 CFR 63, the Permittee must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to 40 CFR 63 and must make the plan available upon request for inspection and copying by the Administrator. The Control Officer may at any time request in writing that the Permittee

submit a copy of any SSM plan (or a portion thereof) which is maintained at the source or in possession of the Permittee. Upon receipt of such a request, the Permittee must promptly submit a copy of the requested plan (or a portion thereof) to the Control Officer. The Control Officer must request that the Permittee submit a particular SSM plan (or a portion thereof) whenever a member of the public submits a specific and reasonable request to examine or to receive a copy of that plan or portion of a plan. The Permittee may elect to submit the required copy of any SSM plan to the Control Officer in an electronic format. If the Permittee claims that any portion of such a SSM plan is confidential business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission.

[40 CFR 63 §§6(e)(3) and 40 CFR 63 Subpart AAAA Table 1]

[County Rule 370 §302.1]

L. Flare Maintenance Recordkeeping

The Permittee shall maintain relative records of all maintenance performed on the flare.

[40 CFR 63 §§10(b)(2)(iii) and 40 CFR 63 Subpart AAAA Table 1]

[County Rule 370 302 §1]

21. REPORTING REQUIREMENTS

**NOTE: Additional reporting requirements are found in the general conditions of this permit.*

A. Landfill Closure:

The Permittee of a controlled landfill shall submit a closure report to the Control Officer within 30 days of waste acceptance cessation. The Control Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258 §60. If a closure report has been submitted to the Control Officer, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

[40 CFR 60 §757(d) and 40 CFR 60 §752(b)(ii)(B)][Maricopa County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][Maricopa County Rule 370§302.56]

B. Equipment Removal:

The Permittee of a controlled landfill shall submit an equipment removal report to the Control Officer 30 days prior to removal or cessation of operation of the control equipment.

- 1) The equipment removal report shall contain all the following items:
 - a) A copy of the closure report submitted in accordance with paragraph (d) of 40 CFR 60 §757;
 - b) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and
 - c) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.
[40 CFR 60 §757(e)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)] [County Rule 370§302.56]
 - d) VOC emission reports demonstrating that such emissions are below 25 tons per year.
[County Rule 241 §301][locally enforceable only]
- 2) The Control Officer may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60 §752(b)(2)(v) have been met.
[40 CFR 60 §757(e)][County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

C. Semi-annual Report:

The Permittee shall file semiannual monitoring reports with the Control Officer, Attn: Large Source Compliance Supervisor. The initial reporting period shall begin on the permit issuance date and shall cover a period of 6 months or less. The second and subsequent reporting periods shall be in 6 month intervals after the end of the initial reporting period. The semiannual monitoring reports shall be filed by the end of the month following the reporting period. Each report shall cover all instances of deviations from these permit conditions during the reporting period, the cause of the deviations if any were present, and any applicable corrective actions taken. The monitoring report shall also contain the following information at a minimum:

- 1) Visible emission observations from the flares, emergency generator(s), and water pump(s):
 - a) Dates on which visible emissions observations were taken;
 - b) Name of the observer;
 - c) Whether or not visible emissions were present;
 - d) The opacity of visual emissions determined by a Method 9 reading, if applicable;

- e) A description of any corrective actions taken, including the date such action was taken;
- f) The name of the individual certified as visible emissions evaluator, the date of last certification, and company/agency providing the certification; and
- g) Any other related information.

[County Rule 210 §302.1 e]

2) Odors:

The Permittee shall include a copy of the portion of the odor log, which covers the applicable 6 month reporting period in each of the semiannual compliance reports. If no complaints were received during the reporting period, a statement to that effect may be substituted for the copy of the odor log.

[County Rule 210 §302.1.e.(1)][locally enforceable only][County Rule 320 §300]

3) Gasoline Storage Tanks Greater than 250 Gallons

The Permittee shall include the following in each Semi-annual compliance report a certification that the gasoline throughput limit of this permit was not exceeded. If such certification can not be provided, the Permittee shall identify the reasons and shall instead submit a statement detailing any corrective actions taken.

[County Rule 210 §302.1.e.(1)][locally enforceable only][County Rule 353]

[SIP Rule 353]

4) Emergency Generator and Water Pump

The Permittee shall include in each semiannual report the hours of operation for the emergency generator and the water pump.

[County Rule 210 §302.1.e.(1)][locally enforceable only]

5) Startup, Shutdown and Malfunction (SSM)

- a) If actions taken by the Permittee during a SSM of the source (including actions taken to correct malfunction) are consistent with the procedures specified in the source's SSM plan, the Permittee shall state such information in a semiannual SSM report. Such a report shall identify any instance where any action taken by the Permittee during a SSM (including actions taken to correct a malfunction) is not consistent with the source's SSM plan, but the source does not exceed the applicable emission limitation from 40 CFR 60 Subpart WWW. Such a report shall also include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused the applicable emission limitation from 40 CFR 60 Subpart WWW to be exceeded. Reports shall only be required if a SSM occurred during the reporting period.

[40 CFR 63§§10(d)(5) and Subpart AAAA Table 1]

[County Rule 370 302 §1]

- b) The SSM semiannual report shall include information on all deviations that occurred during the reporting period. A deviation occurs when:

- (1) a SSM plan is not developed, implemented , or maintained on site.

- (2) There is a failure to meet an emission limitation (including any operating limit) or work practice standard in 40 CFR 60 WWW during SSM, regardless of whether or not such failure is permitted by 40 CFR 63 Subpart AAAA.
 - c) The SSM report shall consist of a letter, containing the name, title, and signature of the Permittee or other responsible official who is certifying its accuracy, that shall be submitted to the Control Officer semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the Control Officer in this permit).
 - d) The SSM report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate). If the Permittee is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports under 40 CFR Part 63, the SSM reports required by 40 CFR 63 §10(d)(5) may be submitted simultaneously with the excess emissions and continuous monitoring system performance (or other) reports. If SSM reports are submitted with excess emissions and continuous monitoring system performance (or other periodic) reports, and the Permittee receives approval to reduce the frequency of reporting for the latter under 40 CFR 63 §10(e), the frequency of reporting for the SSM reports may be reduced if the Control Officer does not object to the intended change. The procedures to implement the allowance in the preceding sentence shall be the same as the procedures specified in 40 CFR 63 §10(e)(3).

[40 CFR 63 §10(d)(5)(i)][40 CFR 63 §1980(b)]
[County Rule 370 §302.1][County Rule 370 §302.56]
- 6) **Landfill Monitoring Report**
Report all deviations that occurred during the reporting period. The Permittee shall use continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d), to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, the Permittee has failed to meet the control device operating conditions and has deviated from the requirements of Subpart AAAA of 40 CFR 63. For the purposes of the landfill monitoring requirements, deviations include:
- a) A deviation occurs when the flare operating parameter boundaries described in 40 CFR 60.758(c)(1) are exceeded.
 - b) A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.
 - c) A deviation occurs when the source fails to meet any requirement or obligation established by 40 CFR 63 Subpart AAAA, including, but not limited to, any emissions limitation(including any operating limit) or work practice standard
 - d) A deviation occurs when the source fails to meet any term or condition that is adopted to implement an applicable requirement in 40 CFR 63 Subpart AAAA and that is included in this permit. Deviations for numerical continuous parameter monitors shall be determined using a 3 hour monitoring block average. Averages are calculated in the same way as they are calculated in 40 CFR 60, subpart WWW, except that the data collected during the events listed below are not to be included in any average computed under 40 CFR 63 Subpart AAAA:

- (1) Monitoring system breakdowns, repairs, calibration checks, and zero(low-level) and high-level adjustments
- (2) Startups
- (3) Shutdowns
- (4) Malfunctions

[40 CFR 63 §§1960 and 1965] [40 CFR 63 §§1955(c) and 1975]

7) VOC Report for Landfill Surface Emissions

The Permittee shall submit a VOC emissions report to the Control Officer initially and semiannually thereafter. The VOC emissions report shall include all the calculations and data used to estimate the semiannual emissions. The Control Officer may request such additional information as may be necessary to verify the reported VOC emissions.

[County Rule 210 §302.1.e.(1)][locally enforceable only][County Rule 241 §301]

D. Immediate SSM Reports:

Any time an action taken by the Permittee during a SSM (including actions taken to correct a malfunction) is not consistent with the procedures specified in the SSM plan, and the source exceeds the applicable emission limitation in 40 CFR 60 Subpart WWW, the Permittee shall report the actions taken for that event:

- 1) The immediate report required shall consist of a telephone call or Fax transmission to the Control Officer within 2 working days after commencing actions inconsistent with the plan, and
- 2) it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name, title and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the SSM plan, and describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred.
- 3) Notwithstanding the requirements of the previous paragraph, the Permittee may make alternative reporting arrangements, in advance, with the Control Officer. Procedures governing the arrangement of alternative reporting requirements under 40 CFR 63 §10(d)(5)(ii) are specified in 40 CFR 63 §9(i).

[40 CFR §63.10(d)(5)(ii) and 40 CFR 63 Subpart AAAA Table 1]

[County Rule 370 §302.1]

E. NMOC Report:

- 1) Initial Design Capacity: Except as provided in 40 CFR 60 §752(b)(2)(i)(B), the Permittee shall submit an initial design capacity report to the Control Officer. The initial design capacity report shall fulfill the requirements of the notification of the date construction is commenced as required by 40 CFR 60.7(a)(1) and shall be submitted no later than ninety days after the date of commenced construction, modification, or reconstruction.

The initial design capacity report shall contain the following information:

- a) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the Arizona Department of Environmental Quality (ADEQ).
- b) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by ADEQ, a copy of the permit

specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with the relevant parameters as part of the report.

- 2) An amended design capacity report shall be submitted to the Control Officer providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to or above 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required by this permit.
- 3) The Permittee shall submit an NMOC emission rate report to the Control Officer initially and annually thereafter, except as provided for in paragraphs (b)(1)(ii) or (b)(3) of 40 CFR 60 §757(b). The Control Officer may request such additional information as may be necessary to verify the reported NMOC emission rate.
 - a) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR 60.754(a) or (b), as applicable.
 - (1) The initial NMOC emission rate report may be combined with the initial design capacity report required by this permit condition and shall be submitted no later than ninety days after the date of commenced construction, modification, or reconstruction. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in 40 CFR 60.757(b)(1)(ii) and (b)(3).
 - (2) If the estimated NMOC emission rate as reported in the annual report to the Control Officer is less than 50 megagrams per year in each of the next 5 consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Control Officer. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Control Officer. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.
 - b) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.
 - c) The Permittee is exempted from the requirements of subsections a) and b), after the installation of a collection and control system in compliance with 40 CFR 60.752(b)(2), during such time as the collection and control system is in operation and in compliance with this Permit.

[40 CFR 60 §§757(a)(2), (a)(3) and (b)] [County Rule 360 §301.74]
[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

- 4) If subject to the provisions of 40 CFR 60 §752(b)(2)(i), the Permittee shall submit a collection and control system design plan to the Control Officer within 1 year of either calculation of the first report required under 40 CFR 60 §757(b) in which the NMOC emission rate equals or exceeds 50 megagrams per year, or determination that the VOC emission rate exceeds 20 tons per year, whichever is earlier, except as follows:
 - a) If the Permittee elects to recalculate the NMOC or VOC emission rate after Tier 2 NMOC sampling and analysis as provided in 40 CFR 60 §754(a)(3) and the resulting rate is less than 50 megagrams per year for NMOC or 20 tons per year for VOC, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year for NMOC, 20 tons per year for VOC, or the landfill is closed. The revised NMOC/VOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year of NMOC or 20 tons per year of VOC, whichever is earlier.
 - b) If the Permittee elects to recalculate the NMOC or VOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40 CFR 60 §754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr and the resulting VOC emission rate is less than 20 tons per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emission rate calculation results in an exceedance. The revised NMOC/VOC emission rate report based on the provisions of 40 CFR 60 §754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Control Officer within 1 year of the first calculated emission rate exceeding 50 megagrams per year of NMOC or 20 tons per year of VOC, whichever is earlier.

[County Rule 241 §301][40 CFR 60 §757(c)][County Rule 360 §301.74]
[40 CFR 63 §1955(a)(1)][County Rule 370 §302.56]

F. NSPS Reporting Requirements.

The Permittee of a landfill seeking to comply with 40 CFR 60 §752(b)(2) using an active collection system designed in accordance with 40 CFR 60 §752(b)(2)(ii) shall submit to the Control Officer semiannual reports of the recorded information in the subsections below. The initial semiannual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60 §758(c).

- 1) Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60 §756(a),(b), and (c).
- 2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 60 §756.
- 3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.
- 4) All periods when the collection system was not operating in excess of 5 days.

- 5) The location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 60 §753(d) and the concentrations recorded at each location for which an exceedance was recorded in the previous month.
- 6) The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of 40 CFR 60 §755.

[40 CFR 60 §757(f)][County Rule 360 §301.74]

[40 CFR 60 §1980(a)] [40 CFR 63§1955(a)(1)][County Rule 370§302.56]

G. Performance Test Report

The Permittee shall include the following information with the initial performance test report required under 40 CFR 60.8:

- 1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;
- 2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
- 3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
- 4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of gas generation flow rate for each excluded area; and
- 5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and
- 6) The provisions for the control of off-site migration.

[40 CFR 60 §757(g)][County Rule 360 §301.74] [40 CFR 63§1955(a)(1)]

[County Rule 370§302.56][County Rule 200 §309 (locally enforceable only)]

[County Rule 210 §302.1.e.(1)]

22. TESTING REQUIREMENTS

**NOTE: All test protocols, notifications and reports required by this permit condition should be addressed to the attention of the Compliance Test Supervisor.*

The Permittee shall conduct performance testing as follows:

- A. The Permittee shall conduct an emissions test on each flare within 60 days after it has achieved capability to operate at its maximum production rate on a sustained basis but no later than 180 days after their initial start-up. The testing shall be used to determine compliance with the nonmethane organic compounds (NMOC) destruction efficiency as well as for the NO_x and CO emission rates.

The above time frames may be extended by the Control Officer for good cause, but in no case shall the testing period extend for more than 180 days after the initial start-up of the flare.

[County Rules 200 §309, 360 §301.74, and 370 §302.1]

[County Rule 270][SIP Rule 270][40 CFR §60.752(b)(2)(iii)(B)]

[40 CFR §63.6(f)(2)(i)][40 CFR 63§1955(a)(1)][County Rule 370§302.56]

B. NMOC Destruction:

Testing shall be performed in accordance with test Methods 25, 25C or 18 of 40 CFR Part 60 Appendix A unless another method to demonstrate compliance has been approved by the EPA Administrator and the County Control Officer as provided by 40 CFR 60.752 §(b)(2)(i)(B). Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. If using Method 18 of appendix A of 40 CFR Part 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = \left\{ \frac{(\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}})}{\text{NMOC}_{\text{in}}} \right\}$$

where,

NMOC_{in} = mass of NMOC entering control device

NMOC_{out} = mass of NMOC exiting control device

[40 CFR §60.754(d)][County Rule 360 §301.74]

[40 CFR 63§1955(a)(1)][County Rule 370§302.56]

CO and NO_x Emission Rates:

Method 7E must be used to determine the NO_x emission rate and Method 10 must be used to determine the CO emission rate, unless alternative methods are established.

[County Rule 200 §309]

- C. Performance tests shall be conducted under such conditions as the Control Officer shall specify based upon representative performance of the source or facility. The Permittee shall make available to the Control Officer such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions of performance tests unless otherwise specified in the applicable standard.

[County Rule 270 §403]

- D. The Permittee shall provide, or cause to be provided, source testing facilities as follows:

- a) Sampling ports adequate for the applicable test methods
- b) Safe sampling platform(s)
- c) Safe access to sampling platform(s)
- d) Utilities for testing and sampling equipment.

[County Rule 270 §405]

- E. The Permittee shall submit an approvable test protocol to the Department, for review and approval at least 30 days prior to the emission test.

[County Rule 270 §301.1][County Rule 280 §301.5]

- F. The Permittee shall notify the Department in writing at least two weeks in advance of the actual time and date of the emissions test so that the Division may have a representative attend.

[County Rule 270 §404]

- G. The Permittee shall complete and submit a report to the Department within 45 days after the completion of the emissions test. The report shall summarize the results of the testing in sufficient detail to allow a compliance determination and demonstration to be made.
[County Rule 270 §§301.1 & 401]

23. DUST CONTROL PLAN REQUIRED

- A. The Permittee shall submit a Dust Control Plan and obtain the Control Officer's approval of the Dust Control Plan, before commencing any routine dust generating operation. The Dust Control Plan shall describe all control measures to be implemented before, after and while conducting any dust generating operation, including during weekends, after work hours, and on holidays. The Plan shall include at least all the information contained in County Rule 310 §304. At least one primary control measure and one contingency control measure must be identified from Tables 1-19 of County Rule 310.
[County Rule 310 §§303, 303.2, 303.3(b) and 303.4(a)]
[SIP Rule 310 §§303, 303.2, 303.3(b) and 303.4(a)]
- B. Failure to comply with the provisions of an approved Dust Control Plan is deemed to be a violation of this Permit. Regardless of whether an approved Dust Control Plan is in place or not, the Permittee is still subject to all requirements of these permit conditions at all times. In addition, the Permittee with an approved Dust Control Plan is still subject to all of the requirements of County Rule 310, even if the Permittee is complying with the approved Dust Control Plan.
[County Rule 310 §§303.1 and 306] [SIP Rule 310 §§303.1 and 306]
- C. If the Control Officer determines that an approved Dust Control Plan has been followed, yet fugitive dust emissions from any given fugitive dust source still exceed limits from this permit condition, then the Permittee shall make written revisions to the Dust Control Plan and shall submit such revised Dust Control Plan to the Control Officer within three working days of receipt of the Control Officer's written notice, unless such time period is extended by the Control Officer, upon request, for good cause. During the time that the Permittee is preparing revisions to the approved Dust Control Plan, the Permittee must still comply with all requirements of these permit conditions.
[County Rule 310 §305] [SIP Rule 310 §305]
- D. If any changes to a Dust Control Plan, associated with a Title V Permit, are necessary as a result of the most recent revisions of County Rule 310, then the Permittee shall submit a revised Dust Control Plan to the Control Officer, according to the minor permit revision procedures describe in County Rule 210, no later than 6 months after the effective date of the most recent revisions to County Rule 310.
[County Rule 310 §402.2] [SIP Rule 310 §402.2]

24. PERMIT SHIELD

Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included in the Permit and expressly identified in Appendix C "Permit Shield" of this Permit. The Permit Shield shall not extend to minor permit revisions.

SUPPORT ACTIVITIES

25. ARCHITECTURAL COATINGS

A. OPERATIONAL LIMITATIONS / STANDARDS:

The Permittee shall limit the volatile organic compound (VOC) content of architectural coatings as follows:

- 1) Pavement Sealer: [County Rule 335 §301][SIP Rule 335 §301]
The Permittee shall not apply any architectural coating manufactured after July 13, 1988, which is recommended for use as a bituminous pavement sealer unless it is an emulsion type coating.
- 2) Non-Flat Architectural Coating: [County Rule 335 §303][SIP Rule 335 §303]
The Permittee shall not apply any non-flat architectural coating manufactured after July 13, 1990, which contains more than 2.1 lbs (250 g/l) of volatile organic compounds per gallon of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings listed below.
- 3) Flat Architectural Coating: [County Rule 335 §304][SIP Rule 335 §304]
The Permittee shall not apply any flat architectural coating manufactured after July 13, 1989, which contains more than 2.1 lbs (250 g/l) of volatile organic compounds per gallon of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings listed below.
- 4) Specialty Coatings: [County Rule 335 §305][SIP Rule 335 §305]
The Permittee shall not apply any architectural coating manufactured after July 13, 1991 that exceeds the following limits. The limits are expressed in pounds of VOC per gallon of coating as applied, excluding water and any colorant added to tint bases.

| <u>COATING</u> | <u>(lb./gal)</u> |
|----------------------------------------------|------------------|
| Concrete Curing Compounds | 2.9 |
| Dry Fog Coating | |
| Flat | 3.5 |
| Non-flat | 3.3 |
| Enamel Undercoaters | 2.9 |
| General Primers, Sealers and Undercoaters | 2.9 |
| Industrial Maintenance Primers and Topcoats | |
| Alkyds | 3.5 |
| Catalyzed Epoxy | 3.5 |
| Bituminous Coating Materials | 3.5 |
| Inorganic Polymers | 3.5 |
| Vinyl Chloride Polymers | 3.5 |
| Chlorinated Rubbers | 3.5 |
| Acrylic Polymers | 3.5 |
| Urethane Polymers | 3.5 |
| Silicones | 3.5 |
| Unique Vehicles | 3.5 |
| Lacquers | 5.7 |

| | |
|------------------------------------------------------------|-----|
| Opaque Stains | 2.9 |
| Wood Preservatives | 2.9 |
| Quick Dry Enamels | 3.3 |
| Roof Coatings | 2.5 |
| Semi-transparent Stains | 2.9 |
| Semi-transparent and Clear Wood Preservatives | 2.9 |
| Opaque Wood Preservatives | 2.9 |
| Specialty Flat Products | 3.3 |
| Specialty Primers, Sealers & Undercoaters | 2.9 |
| <i>Stains, All</i> ¹ | 2.9 |
| Traffic Coatings | |
| Applied to Public Streets and Highways | 2.1 |
| Applied to other Surfaces | 2.1 |
| Black Traffic Coatings | 2.1 |
| Varnishes | 2.9 |
| Waterproof Mastic Coating | 2.5 |
| Waterproof Sealers | 3.3 |
| <i>Wood Preservatives Except Below Ground</i> ¹ | 2.9 |

¹ These italicized Coatings are not formally not part of Rule 335 but are alphabetized repeats of listed coatings.

- 5) Exemptions: [County Rule 335 §§306, 307] [SIP Rule 335 §§306, 307]
The VOC content requirement of this Permit Condition shall not apply to the following:
- a) Architectural coatings supplied in containers having capacities of one quart or less.
 - b) Architectural coatings recommended by the manufacturer for use solely as one or more of the following:
 - (1) Below ground wood preservative coatings.
 - (2) Bond breakers.
 - (3) Fire retardant coatings.
 - (4) Graphic arts coatings (sign paints)
 - (5) Mastic texture coatings.
 - (6) Metallic pigmented coatings.
 - (7) Multi-colored paints.
 - (8) Quick-dry primers, sealers and undercoaters.
 - (9) Shellacs.
 - (10) Swimming pool paints.
 - (11) Tile-like glaze coatings.

B. RECORDKEEPING: [County Rule 210 §302.1.c.]

The Permittee shall keep a material list of all coatings used. The material list shall contain name of each coating, short description of the material, pounds of VOCs per gallon of coating, excluding water and colorant added to tint bases and amount used. If the coating is exempt from the volatile organic compounds content requirements, the justification for the determination shall be documented and kept on file.

- C. REPORTING: [County Rule 210 §302.1.e.]
The Permittee shall include the following in the semiannual compliance report:
- 1) A material list showing VOC content in lb./gallon or grams/liter of each coating used during the reporting period.
 - 2) A list of the coatings which are exempt from the volatile organic compounds content requirements and a reason for the exemption.
- D. TESTING: [County Rule 335 §500][SIP Rule 335 §500]
If required by the Control Officer testing procedures to determine compliance with prescribed VOC limits shall be consistent with Reference Methods 24 and 24A in the Arizona Testing Manual for Air Pollutant Emissions.

APPENDIX A LIST OF EQUIPMENT

PERMITTED EQUIPMENT:

- 1) Gas Control
FL-1, FL-2, FL3 - Three (3) Identical Enclosed Flares with a condensate injection system capable of 98 % or higher destruction efficiency for NMOC and VOC
- 2) Gas Collection System
Consisting of perforated pipes that collect the landfill gas and route it to larger header pipes. Gas blowers convey the gas from the header pipes to the flare.
- 3) Internal Combustion Engines:
TP-1 and **TP-2** Tipper Engines, 106 hp each. (NONROAD ENGINES)
- 4) Gasoline Storage Tanks Greater than 250 Gallons
TK-1 1000 gallon (approximately) tank.

INSIGNIFICANT ACTIVITIES:

- 1) 80 hp diesel water pump
- 2) 49 hp diesel emergency generator
- 3) Leachate Pumps
- 4) Light Plants with generator engines < 25 hp

APPENDIX B
FUGITIVE DUST CONTROL MEASURES TABLES 1 - 20

Table 1
Vehicle Use In Open Areas And Vacant Lots

- a. An owner and/or operator must implement one of the following control measures:
 - 1. Restrict trespass by installing signs; or
 - 2. Install physical barriers such as curbs, fences, gates, posts, signs, shrubs, and/or trees to prevent access to the area.

Table 2
Unpaved Parking Lots

- a. An owner and/or operator must implement one of the following control measures:
 - 1. Pave;
 - 2. Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with Section 302.1 of County Rule 310; or
 - 3. Apply a suitable dust suppressant in compliance with Section 302.1 of County Rule 310.
- b. Suggested additional control measure for contingency plans:
 - 1. Limit vehicle speeds to 15 m.p.h. on the site.

Table 3
Unpaved Haul/Access Roads

- a. An owner and/or operator must implement one of the following control measures:
 - 1. Limit vehicle speed to 15 m.p.h or less and limit vehicular trips to no more than 20 day;
 - 2. Apply water, so that the surface is visibly moist in compliance with Section 302.2 of County Rule 310;
 - 3. Pave;
 - 4. Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with Section 302.2 of County Rule 310; or
 - 5. Apply a suitable dust suppressant, in compliance with Section 302.2 of County Rule 310.

Table 4
Open Areas And Vacant Lots

- a. An owner and/or operator must implement one of the following control measures to comply with Section 302.3 of County Rule 310:
 - 1. Pave, apply gravel, or apply a suitable dust suppressant;
 - 2. Establish vegetative ground cover in sufficient quantity; or
 - 3. Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions.

Table 5

Disturbed Surface Areas – Pre-Activity Work Practices

- a. Before activity begins, an owner and/or operator must implement one of the following control measures:
 - 1. Pre-water site to depth of cuts, allowing time for penetration; or
 - 2. Phase work to reduce the amount of disturbed surface areas at any one time.

Table 6

Disturbed Surface Areas – Work Practices During Operations

- a. During operations, an owner and/or operator must implement one of the following control measures:
 - 1. Apply water or other suitable dust suppressant, in compliance with Section 301 of County Rule 310;
 - 2. Apply water as necessary to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98 or other equivalent method as approved by the Control Officer and the Administrator of EPA. For areas that have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91 (1998) or other equivalent method approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content; or
 - 3. Implement (a)(1) or (a)(2) above and construct fences or three-foot to five-foot high wind barriers with 50% or less porosity adjacent to roadways or urban areas to reduce the amount of windblown material leaving a site.
- b. Suggested additional control measure for contingency plans:
 - 1. Limit vehicle speeds to 15 m.p.h on the work site.

Table 7

**Disturbed Surface Areas – Temporary Stabilization (Up To 8 Months)
During Weekends, After Work Hours, And On Holidays**

- a. An owner and/or operator must implement one of the following control measures to comply with Section 302.3 of County Rule 310:
 - 1. Pave, apply gravel, or apply a suitable dust suppressant;
 - 2. Establish vegetative ground cover in sufficient quantity; or
 - 3. Implement (a)(1) or (a)(2), above, and restrict vehicular access to the area.

Table 8

**Disturbed Surface Areas – Permanent Stabilization
(Required Within 8 Months Of Ceasing Dust Generating Operations)**

- a. An owner and/or operator must implement one of the following control measures to comply with Section 302.3 of County Rule 310:
 - 1. Pave, apply gravel, or apply a suitable dust suppressant;
 - 2. Establish vegetative ground cover in sufficient quantity; or
 - 3. Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions.

Table 9

Blasting Operations

- a. An owner and/or operator must implement all of the following control measures:
 - 1. In wind gusts above 25 m.p.h., discontinue blasting; and
 - 2. Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.

Table 10

Demolition Activities

- a. An owner and/or operator must implement all of the following control measures:
 - 1. Stabilize demolition debris. Apply water to debris immediately following demolition activity; and
 - 2. Stabilize surrounding area immediately following demolition activity. Water all disturbed soil surfaces to establish a crust and prevent wind erosion of soil.
- b. Suggested additional control measure for contingency plans:
 - 1. Thoroughly clean blast debris from paved and other surfaces following demolition activity.

Table 11

Bulk Material Handling Operations

Work Practices For Stacking, Loading, And Unloading Operations

- a. An owner and/or operator must implement one of the following control measures:
 - 1. Spray material with water, as necessary, prior to stacking, loading, and unloading, and/or while stacking, loading, and unloading;
 - 2. Spray material with a dust suppressant other than water, as necessary, prior to stacking, loading, and unloading, and/or while stacking, loading, and unloading.
- b. Suggested additional control measures for contingency plans:
 - 1. Pre-water and maintain surface soils in a stabilized condition where support equipment and vehicles will operate.
 - 2. Remove material from the downwind side of the storage pile when safe to do so.
 - 3. Empty loader bucket slowly and keep loader bucket close to the truck to minimize the drop height while dumping.

Table 12

Open Storage Piles

When Not Conducting Stacking, Loading, And Unloading Operations

- a. An owner and/or operator must implement one of the following control measures:
 - 1. Cover open storage piles with tarps, plastic, or other material such that the coverings will not be dislodged by wind;
 - 2. Apply water to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98, or other equivalent methods approved by the Control Officer and the Administrator of the EPA; or for areas that have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91 (1998) or other equivalent methods approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the soil moisture content;
 - 3. Meet the stabilization requirements described in Section 302.3 of County Rule 310; or

4. Implement (a)(2) or (a)(3), above, and construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%.

Table 13
Bulk Material Hauling/Transporting Within The Boundaries Of The Work Site
When Crossing A Paved Area Accessible To The Public
While Construction Is Underway

- a. An owner and/or operator must implement all of the following control measures:
 1. Load all haul trucks such that the freeboard is not less than 3 inches when crossing a paved area accessible to the public while construction is underway;
 2. Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s);
 3. Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site.
- b. Suggested additional control measure for contingency plans:
 1. Limit vehicle speeds to 15 m.p.h. on the work site.

Table 14
Bulk Material Hauling/Transporting When On-Site Hauling/Transporting
Within The Boundaries Of The Work Site But Not Crossing
A Paved Area Accessible To The Public

- a. An owner and/or operator must implement one of the following control measures:
 1. Limit vehicular speeds to 15 m.p.h. or less while traveling on the work site;
 2. Apply water to the top of the load in compliance with Section 301 of County Rule 310; or
 3. Cover haul trucks with a tarp or other suitable closure.

Table 15
Bulk Material Hauling/Transporting Off-Site Hauling/Transporting
Onto Paved Areas Accessible To The Public

- a. An owner and/or operator must implement all of the following control measures:
 1. Cover haul trucks with a tarp or other suitable closure;
 2. Load all haul trucks such that the freeboard is not less than 3 inches;
 3. Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
 4. Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

Table 16

Clean Up Of Trackout, Carry Out, Spillage, And Erosion

- a. An owner and/or operator must implement one of the following control measures:
 - 1. Operate a street sweeper or wet broom with sufficient water, at the speed recommended by the manufacturer and at the frequency(ies) described in Section 308.3 of County Rule 310; or
 - 2. Manually sweep up deposits in compliance with Section 308.3 of County Rule 310.

Table 17

Trackout Control

- a. An owner and/or operator must implement all of the following control measures:
 - 1. Immediately clean up trackout that exceeds 50 feet. All other trackout must be cleaned up at the end of the workday; and
 - 2. In accordance with Section 308.3(a), prevent trackout by implementing one of the following control measures:
 - i. At all access points, install a grizzly or wheel wash system.
 - ii. At all access points, install a gravel pad at least 30 feet wide, 50 feet long, and 6 inches deep, in compliance with Section 213 of County Rule 310.
 - iii. Pave starting from the point of intersection with a paved area accessible to the public and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.
- b. Suggested additional control measures for contingency plans:
 - 1. Clearly establish and enforce traffic patterns to route traffic over selected trackout control devices.
 - 2. Limit site accessibility to routes with trackout control devices in place by installing effective barriers on unprotected routes.
 - 3. Pave construction activity roadways as soon as possible.

Table 18

Weed Abatement By Discing Or Blading

- a. An owner and/or operator must implement all of the following control measures:
 - 1. Pre-water site;
 - 2. Apply water while weed abatement by discing or blading is occurring; and
 - 3. Stabilize area by implementing either one of the following:
 - i. Pave, apply gravel, apply water, or apply a suitable dust suppressant, in compliance with Section 302.3 of County Rule 310, after weed abatement by discing or blading occurs; or
 - ii. Establish vegetative ground cover in sufficient quantity, in compliance with Section 302.3 of County Rule 310, after weed abatement by discing or blading occurs.
- b. Suggested additional control measures for contingency plans
 - 1. Limit vehicle speeds to 15 m.p.h. during discing and blading operations.

Table 19

Easements, Rights-Of-Way, And Access Roads For Utilities (Electricity, Natural Gas, Oil, Water, And Gas Transmission) Associated With Sources That Have A Non-Title V Permit, A Title V Permit, And/Or A General Permit Under These Rules

- a. An owner and/or operator must implement one of the following control measures:
 - 1. Inside the PM10 nonattainment area, restrict vehicular speeds to 15 m.p.h. and vehicular trips to no more than 20 per day per road;
 - 2. Outside the PM10 nonattainment area, restrict vehicular trips to no more than 20 per day per road; or
 - 3. Implement control measures, as described in Table 3 (Unpaved Haul/Access Roads) of County Rule 310.

Note: For Tables 20 & 21, control measures in [brackets] are to be applied only to dust generating operations outside the nonattainment area.

Table 20

Wind Event Control Measures-Dust Generating Operations

- a. An owner and/or operator must implement one of the following control measures:
 - 1. Cease dust generating operations for the duration of the condition/situation/event when the 60-minute average wind speed is greater than 25 m.p.h. and if dust generating operations are ceased for the remainder of the work day, stabilize the area;
 - 2. Apply water or other suitable dust suppressant at least twice [once] per hour, in compliance with Section 301 of County Rule 310;
 - 3. Apply water as necessary to maintain a soil moisture content at a minimum of 12%, as determined by ASTM Method D2216-98 or other equivalent method as approved by the Control Officer and the Administrator of EPA. For areas that have an optimum moisture content for compaction of less than 12%, as determined by ASTM Method D1557-91 (1998) or other equivalent method approved by the Control Officer and the Administrator of EPA, maintain at least 70% of the optimum soil moisture content; or
 - 4. Implement (a)(2) or (a)(3), above, and construct fences or three-foot to five-foot high wind barriers with 50% or less porosity adjacent to roadways or urban areas to reduce the amount of wind-blown material leaving a site.

Table 21
Wind Event Control Measures-Temporary Disturbed Surface Areas
(After Work Hours, Weekends, Holidays)

- a.** An owner and/or operator must implement one of the following control measures:
 - 1.** Uniformly apply and maintain surface gravel or dust suppressants, in compliance with Section 302.3 of County Rule 310;
 - 2.** Apply water to all disturbed surface areas 3 times per day. If there is any evidence of wind-blown dust, increase watering frequency to a minimum of 4 times per day;
 - 3.** Apply water on open storage piles at least twice [once] per hour, in compliance with Section 302.3 of County Rule 310; or
 - 4.** Cover open storage piles with tarps, plastic, or other material such that wind will not remove the covering(s).
- b.** Suggested additional control measures for contingency plans:
 - 1.** Implement a combination of the control measures listed in (a)(1) through (a)(4), above.

APPENDIX C
Permit Shield
City of Phoenix SR85 Landfill
V03002

Identified below are all federal, state, and local air pollution control requirements applicable to the Permittee at the time the permit is issued. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included in the Permit and expressly identified in Appendix C "Permit Shield" of this Permit. The Permit Shield shall not extend to minor permit revisions.

For each part, subpart, section, and subsection reference listed, all subsequent sections are assumed applicable. All other subparts or sections not listed are not applicable.

Maricopa County
Air Pollution Control Regulations

Regulation I: General Provisions

| <u>Rule 100</u> | General Provisions and Definitions (11/6/02 revision) |
|-----------------|--------------------------------------------------------------|
| §104 | Circumvention |
| §105 | Right of Inspection of Premises |
| §106 | Right of Inspection of Records |
| §301 | Air Pollution Prohibited |
| §401 | Certification of Truth, Accuracy, and Completeness |
| §402 | Confidentiality of Information |
| §501 | Reporting Requirements |
| §502 | Data Reporting |
| §503 | Emission Statements Required as Stated in the Act |
| §504 | Retention of Records |
| §505 | Annual Emissions Inventory Report |

| <u>Rule 130</u> | Emergency Provisions (7/26/00 revision) |
|-----------------|------------------------------------------------|
| §201 | Emergency |
| §402 | Affirmative Defense for Emergency |

| <u>Rule 140</u> | Excess Emissions (9/5/01 revision) |
|-----------------|-------------------------------------------|
| §103 | Exemptions |
| §400 | Administrative Requirements |
| §500 | Monitoring and Records |

Regulation II: Permits and Fees

| Rule 200 | Permit Requirements (8/22/01 revision) |
|-----------------|-----------------------------------------------------------|
| §301 | Permits Required |
| §305 | Earth Moving Permit |
| §306 | Permit to Burn |
| §308 | Standards for Applications |
| §309 | Permit Conditions |
| §310 | Prohibition – Permit Modification |
| §311 | Permit Posting Requirement |
| §402.1 | Permit Reopenings; Revocation and Reissuance; Termination |
| §403.2 | Permit Renewal and Expiration |
| §404 | Permit Transfers |
| §407 | Air Quality Impact Models |
| §408 | Testing Procedures |
| §409 | Permit Fees |
| §411 | Public Records; Confidentiality |

| Rule 210 | Title V Permit Provisions (5/7/03 revision) |
|-----------------------------|--------------------------------------------------------------------------------|
| §301.1 | Standard Application Form and Required Information |
| §301.2(a) and (c) | Timely Application |
| §301.4(a)-(d), (f), and (h) | Complete Application |
| §301.5 | Permit Application Submittal Information |
| §301.6 | Duty to Supplement or Correct Application |
| §301.7 | Certification of Truth, Accuracy, and Completeness |
| §301.8(b)(4) | Action on Application |
| §301.9 | Requirement for a Permit |
| §302.1(a) | Elements Required in a Permit |
| §302.1(b) | Enforceable Emission Limitations and Standards |
| §302.1(c) | Monitoring Requirements |
| §302.1(d) | Recordkeeping Requirements |
| §302.1(e)(1) | Reporting Requirements |
| §302.1(f) | Prohibition of Emissions Exceeding Allowances Lawfully held by the Source |
| §302.1(g) | Severability Clause |
| §302.1(h) | Provisions |
| §302.1(i) | Provisions |
| §302.1(j) | Provisions |
| §302.3 | Compliance Plan |
| §302.5 | Title V Permit Revisions |
| §303.1(a) | Permit Review by the Environmental Protection Agency (EPA) and Affected States |
| §303.2 | Permit Review by the Environmental Protection Agency (EPA) and Affected States |
| §305.1(b)(1) | Compliance Plan; Certification |
| §305.1(c)(1) | Reporting Requirements |

| Rule 210 | Title V Permit Provisions (5/7/03 revision) |
|---------------------|----------------------------------------------------|
| 305.1(b) | Compliance Plan: Certification |
| 305.1(c) and (c)(1) | Reporting Requirements |
| §305.1(d) | Compliance Certifications |
| §305.1(e) | Certification of Truth, Accuracy, and Completeness |
| §305.1(f) | Inspection and Entry Provisions |
| §305.1(g) | Compliance Plan |
| §400 | Administrative Requirements |
| §401 | Fees Required |
| §402 | Permit Term |
| §405.4 | Minor Permit Revisions |
| §406.4 | Significant Permit Revisions |
| §407.1 | Permit Shields |
| §407.2 | Permit Shields |
| §407.3 | Permit Shields |

| Rule 241 | Permits for New Sources and Modifications to Existing Sources (6/19/96 revision) |
|-----------------|-----------------------------------------------------------------------------------------|
| §301 | Best Available Control Technology (BACT) Required |

| Rule 270 | Performance Tests (11/15/93 revision) |
|-----------------|----------------------------------------------|
| §300 | Standards |
| §301.1 | Performance Tests Required |
| §400 | Administrative Requirements |
| §401 | Performance Tests Required |
| §403 | Testing Conditions |
| §404 | Notice of Testing |
| §405 | Testing Facilities Required |

| Rule 280 | Fees |
|-----------------|---------------------|
| §301 | Title V Permit Fees |

Regulation III: Control of Air Contaminants

| <u>Rule 300</u> | Visible Emissions (2/7/01 revision) |
|-----------------|-----------------------------------------------------------------------------------|
| §301 | Limitations – Opacity/General |
| §501 | Compliance Determination – Opacity |
| §502 | Compliance Determination – Opacity of Visible Emissions from Intermittent Sources |

| <u>Rule 310</u> | Fugitive Dust (4/7/04 revision) |
|-----------------|-------------------------------------------------|
| §301.1 | Wind Event |
| §301.2 | Emergency Maintenance of Flood Control Channels |

| <u>Rule 310</u> | Fugitive Dust (4/7/04 revision) |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| §302.1 | Unpaved Parking Lot |
| §302.2 | Unpaved Haul/Access Road |
| §302.3 | Open Area and Vacant Lot or Disturbed Surface Area |
| §303.1 | Dust Control Plan Required |
| §303.3 | Primary and Contingency Control Measures |
| §303.4 | Dust Control Plan Exemptions |
| §304 | Elements of a Dust Control Plan |
| §305 | Dust Control Plan Revisions |
| §306 | Control Measures |
| §308 | Work Practices |
| §401 | Dust Control Plan Posting |
| §402.2 | Compliance Schedule |
| §501.1 | Opacity Observations |
| §501.2 | Stabilization Observations |
| §502 | Recordkeeping |
| §503 | Records Retention |
| Table 1 | Vehicle Use in Open Areas and Vacant Lots |
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| Table 6 | Disturbed Surface Areas – Work Practices During Operations |
| Table 7 | Disturbed Surface Areas – Temporary Stabilization (up to 8 Months) During Weekends, after Work Hours, and on Holidays |
| Table 8 | Disturbed Surface Areas – Permanent Stabilization (Required within 8 Months of Ceasing Dust Generating Operations) |
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| Table 12 | Open Storage Piles when not Conducting Stacking, Loading, and Unloading Operations |
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| Rule 310 | | Fugitive Dust (4/7/04 revision) |
|-----------------|----------|--------------------------------------------------------------------------------------------------------|
| | Table 20 | Wind Event Control Measures – Dust Generating Operations |
| | Table 21 | Wind Event Control Measures – Temporary Disturbed Surface Areas (after Work Hours, Weekends, Holidays) |

| Rule 314 | | Open Outdoor Fires |
|-----------------|------|----------------------------------|
| | §301 | Prohibition – Open Outdoor Fires |
| | §302 | Exemptions |

| Rule 320 | | Odors and Gaseous Air Contaminants (7/2/03 revision) |
|-----------------|------|-------------------------------------------------------------|
| | §300 | Standards |
| | §302 | Material Containment Required |
| | §303 | Reasonable Stack Height Required |
| | §304 | Limitation – Hydrogen Sulfide |

| Rule 324 | | Stationary Internal Combustion (IC) Engines (10/23/03 revision) |
|-----------------|--------|------------------------------------------------------------------------|
| | §104.1 | Partial Exemptions for Emergency Engines |
| | §104.2 | Partial Exemptions for Emergency Engines |
| | §104.5 | Partial Exemptions for Emergency Engines |
| | §104.7 | Partial Exemptions for Emergency Engines |
| | §301.1 | Limitations for Existing and New Stationary IC Engines |
| | §303 | Limitations-Opacity |
| | §502.1 | Recordkeeping/Records Retention |
| | §502.4 | Recordkeeping/Records Retention |

| Rule 330 | | Volatile Organic Compounds (6/19/96 revision) |
|-----------------|------|------------------------------------------------------|
| | §305 | Equipment Cleanup |
| | §306 | VOC Containment and Disposal |
| | §503 | Recordkeeping and Reporting |

| Rule 335 | | Architectural Coatings (7/13/88 revision) |
|-----------------|------|--------------------------------------------------|
| | §301 | Prohibition – Bituminous Pavement Sealers |
| | §303 | Final Limits – Non-Flat Architectural Coatings |
| | §304 | Limits – Flat Architectural Coatings |
| | §305 | Limits – Specialty Coatings |
| | §306 | Exemptions – Specific-Use Coatings |
| | §307 | Exemptions – Small Containers |
| | §500 | Monitoring and Records |

| Rule 353 | | Gasoline is Stationary Dispensing Tanks (6/16/99 revision) |
|-----------------|-----------|-------------------------------------------------------------------|
| | §301.1(b) | VOC Emission Standard |
| | §301.2 | Leakage Limits – Liquid Leaks and Spills |
| | §301.3 | Spill Containment Equipment |
| | §302.1 | Fill Pipe Requirements |
| | §302.2 | Fill Pipe Caps |
| | §302.3 | Restrictions on Multiple Fill Pipes |
| | §302.4 | Fill Pipe Obstructions |
| | §302.5 | Overfill Protection Equipment |
| | §305.2(a) | Non-Resale Dispensing Operations from Non-Farm Tanks |
| | §502 | Recordkeeping |

| Rule 360 | | New Source Performance Standards (11/19/03 revision) |
|-----------------|---------|------------------------------------------------------------------------------------------------------------------|
| | §301.1 | Subpart A – General Provisions (as identified in this Permit Shield) |
| | §301.8 | Subpart M – National Emission Standards for Asbestos |
| | §301.74 | Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills (as identified in this Permit Shield) |

| Rule 370 | | Federal Hazardous Air Pollutant Program (11/19/03 revision) |
|-----------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| | §302.1 | Subpart A – General Provisions (as identified in this Permit Shield) |
| | §302.56 | Subpart AAAA – National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills (as identified in this Permit Shield) |

| Rule 371 | | Acid Rain (11/19/03 revision) |
|-----------------|------|------------------------------------------------------------|
| | §301 | Incorporated Subparts of the Federal Acid Rain Regulations |

Regulation VI: Emergency Episodes

| Rule 600 | | Emergency Episodes (7/13/88 revision) |
|-----------------|------|----------------------------------------------|
| | §302 | Control Actions |

Appendices

| Appendix | | (4/7/04 revision) |
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| | C | Fugitive Dust Test Methods |

Federal Requirements

Title 40, Part 60 of the Code of Federal Regulations (40 CFR 60)

| Subpart A | 1.1.1.1. General Provisions |
|-----------|--------------------------------------------------------|
| §11 | Compliance with Standards and Maintenance Requirements |
| §12 | Circumvention |
| §18(c) | General Control Device Requirements for Flares |
| §18(e) | General Control Device Requirements for Flares |

| Subpart WWW | Standards of Performance for Municipal Solid Waste Landfills |
|----------------------------------------|------------------------------------------------------------------|
| §752(b) | Standards for Air Emissions from Municipal Solid Waste Landfills |
| §753(a) – (g) | Operational Standards for Collection and Control Systems |
| §754(a), (b), and (d) | Test Methods and Procedures |
| §755(a)(1), (a)(3), (a)(4), and (a)(5) | Compliance Provisions |
| §755(b) – (e) | Compliance Provisions |
| §756(a)(b), and (f) | Monitoring of Operations |
| §757(a) – (g) | Reporting Requirements |
| §758(a) | Recordkeeping Requirements |
| §758(b)(1) and (2) | Recordkeeping Requirements |
| §758(c), (c)(1)(i), (c)(2), and (c)(4) | Recordkeeping Requirements |
| §758(d) – (e) | Recordkeeping Requirements |
| §759(a) – (b) | Specifications for Active Collection Systems |
| §759(c) and (c)(2) | Specifications for Active Collection Systems |

Title 40, Part 63 of the Code of Federal Regulations (40 CFR 63)

| Subpart A | General Provisions |
|-----------------------|------------------------------------------------|
| §4(b) | Prohibited Activities and Circumvention |
| §6(e)(1) | Operation and Maintenance Requirements |
| §6(e)(3)(i) – (v) | Startup, Shutdown, and Malfunction Plan |
| §6(e)(3)(viii) – (ix) | Startup, Shutdown, and Malfunction Plan |
| §6(f)(2)(i) | Compliance with Non-Opacity Emission Standards |
| §10(b)(2)(i) – (v) | General Recordkeeping Requirements |
| §10(d)(5)(i) and (ii) | General Recordkeeping Requirements |

| Subpart AAAA | National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills |
|--------------|-------------------------------------------------------------------------------------------|
|--------------|-------------------------------------------------------------------------------------------|

| Subpart AAAA | | National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills |
|---------------------|------------------|------------------------------------------------------------------------------------------------------|
| | Table 1 | Applicability of NESHAP General Provisions to Subpart AAAA |
| | §1955(a)(1) | Applicable Requirements |
| | §1955(b) | Applicable Requirements |
| | §1955(c) | Applicable Requirements |
| | §1960 | Compliance Determinations |
| | §1965 | Deviations |
| | §1975 | Calculating 3-Hour Block Averages to Demonstrate Compliance |
| | §1980(a) and (b) | Records and Reports |

State Implementation Plan Requirements

| Regulation 1 | | General Provisions |
|---------------------|---|----------------------------------------------|
| | 3 | Air Pollution Prohibited (4/12/82 published) |

| Regulation 2 | | Permits |
|---------------------|------------|---------------------------------------|
| | 27 | Performance Tests (4/12/82 published) |
| | 220 §302.2 | Permits to Operate (1/6/92 published) |

| Regulation 3 | | Control of Air Contaminants |
|---------------------|----------------------------------------------|----------------------------------------------------------------|
| | 30 | Visible Emissions (4/12/82 published) |
| | 31 | Emissions of Particulate Matter (4/12/82 published) |
| | 32.A, C, and D-F | Odors and Gaseous Emissions (7/27/72 published) |
| | 310 §301.1 and §301.2 | Open Fugitive Dust Sources (8/4/97 published) |
| | 310 §302.1, §302.2 (a) and (b), and §302.3 | Open Fugitive Dust Sources (8/4/97 published) |
| | 310 §303, §303.1, §303.2, §303.3, and §303.4 | Open Fugitive Dust Sources (8/4/97 published) |
| | 310 §304 | Open Fugitive Dust Sources (8/4/97 published) |
| | 310 §305, §306, and §308 | Open Fugitive Dust Sources (8/4/97 published) |
| | 310 §304 | Open Fugitive Dust Sources (8/4/97 published) |
| | 310 §401 and §402.2 | Open Fugitive Dust Sources (8/4/97 published) |
| | 310 §501.1, §501.2, §502, and §503 | Open Fugitive Dust Sources (8/4/97 published) |
| | Tables 1 and 2 | Open Fugitive Dust Sources (8/4/97 published) |
| | 310 §314 | Open Outdoor Fires (8/12/02 published) |
| | 335 §301 | Architectural Coatings (1/6/92 published) |
| | 335 §303 - §307 | Architectural Coatings (1/6/92 published) |
| | 335 §500 | Architectural Coatings (1/6/92 published) |
| | 353 §301.1 | Transfer of Gasoline into Stationary Dispensing Tanks (2/1/96) |

| | | |
|--|------------|--------------------------------------------------------------------------|
| | | published) |
| | 353 §303.2 | Transfer of Gasoline into Stationary Dispensing Tanks (2/1/96 published) |
| | 353 §502 | Transfer of Gasoline into Stationary Dispensing Tanks (2/1/96 published) |

| Regulation 4 | | Production of Records: Monitoring, Testing, and Sampling Facilities |
|---------------------|----------|----------------------------------------------------------------------------|
| | 40.A – D | Record Keeping and Reporting (4/12/82 published) |
| | 41 | Monitoring (4/12/82 published) |
| | 42 | Testing and Sampling (7/27/72 published) |
| | 43 | Right of Inspection (7/27/72 published) |

| Regulation 6 | | Violations |
|---------------------|----------|---------------------------------------|
| | 600 §302 | Emergency Episode (3/18/99 published) |

TECHNICAL SUPPORT DOCUMENT
FOR TITLE V PERMIT
CITY OF PHOENIX SR85 LANDFILL
Permit No. V03002

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February 5, 2005

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| | |
|-----------------------------|------------------------------------------|
| Facility Name: | SR 85 Landfill |
| Address: | 28633 West Patterson Rd. |
| City, State, Zip: | Buckeye, Arizona 85326 |
| Location: | Latitude 33°11'21"; Longitude 112°40'31" |
| Current Operating Permit #: | N/A |
| Permit Application #: | V03002 |
| Date Application Received: | September 9, 2003 |
| Permit Engineer: | Barbara Cenalmor/Amy Young/Kate Graf |

I. INTRODUCTION:

This document summarizes the legal and factual basis for the proposed permit conditions in the Title V Operating Permit to be issued to the City of Phoenix State Route 85 Landfill (hereafter, landfill) under the authority of Rule 200 §302 of the Maricopa County Air Pollution Control Regulations; Title 49, Chapter 3 of the Arizona Revised Statutes (ARS); and Title V of the federal Clean Air Act (CAA), as amended in 1990. Unlike the permit, this document is not a legally enforceable document. It includes references to the applicable statutory or regulatory provisions that relate to landfill's air emissions, and provides a description of SR85's activities, including a compliance history.

The landfill's construction is estimated to commence in 2005, and operations are expected to begin in 2006. The landfill property covers an area of 2,652 acres of which approximately 2,050 may be used for solid waste disposal. The remainder of the site will be occupied with ancillary facilities, storm water management structures, buffer zones around the perimeter of the landfill and a storm water retention area. Landfill activities for the first 25-35 years will occur within an area of approximately 700 acres, and actual waste disposal will occur within an area of approximately 370 acres (i.e. three waste disposal cells). Landfill activities for the first five years (term of this permit) will occur within an area of approximately 360 acres, and actual waste disposal will occur within an 80 acre sub area. The facility will be located in an area within Maricopa County that is currently designated as Subpart 1 (Basic) non attainment for ozone and attainment for carbon monoxide and PM₁₀. Pursuant to 40 CFR 60 Subpart WWW (60.752(c)), the facility is subject to the Title V permitting procedures.

Maricopa County Air Quality Department (MCAQD) received the Title V permit application on September 9, 2003. MCAQD received additional information and clarification to the Title V permit application in a letter dated November 7, 2003. Addendums to the application were also received May 6, 2004 and August 2, 2004. An update to the application was received on August 2, 2004. This permit's application was deemed administratively complete on November 14, 2003.

II. EMISSION UNIT/PROCESS DESCRIPTION:

The landfill's operations are expected to begin in 2006. Operations for the first 25-35 years (3 cell phase) will occur within an area of 700 acres and actual waste disposal activities will occur within a 370 -acre sub-area. Waste will be disposed of within specified areas known as "cells". Waste haul trucks will deposit refuse across an active area. The refuse will be shaped and compacted around the cell using earthmoving equipment, and each day, cover material will be added to the active waste disposal area. The material for the cover will be stockpiled. Operations at the facility fall under the Standard Industrial Classification (SIC) Code 4953, and Source Classification Codes (SCC) 50100402, 50100403, 50100410 and 30502504.

As required by federal regulations, a landfill gas collection/extraction/destruction system is projected to be installed during the initial permit term. This system will be designed in accordance with all applicable requirements.

Emissions from this facility include non-methane organic compounds (NMOC), volatile organic compounds (VOCs), which are precursors to the formation of ozone (a criteria pollutant), particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀), nitrogen oxides (NO_x), carbon monoxide (CO), and hazardous air pollutants (HAPs).

The following is an overview of specific sources of emissions at the landfill.

A. Dust Generating Activities:

Excavated soils are used for daily and intermediate cover, and construction of perimeter berms, final cover, roadways, and dikes. Solid wastes are disposed of by spreading in thin layers and compacted to the smallest practical volume. Compacted waste is covered each day with soil or approved alternate daily cover. Earthmoving equipment is used for daily waste handling. These processes generate fugitive dust emissions. Also, traffic on unpaved roads generates fugitive emissions.

B. Gas Collection and Control:

A flare, which is projected to be installed during the term of this permit, will control the emission of organic compounds (NMOC, VOC, HAPs) from the inactive areas of the landfill. Pipes will collect the gas from such areas and route it to larger header pipes. The gas is finally conveyed by gas blowers to the flare to be combusted. Products of combustion (NO_x, CO, SO_x, VOC, PM₁₀ and HAPs), as well as a small percentage of the unburned gases will be emitted from the flare. Two (2) additional identical flares are projected to be installed over the 25-35 year timeframe for a total of three (3) flares.

C. Storage tanks:

A gasoline storage tank larger of approximately 1,000 gallons will be installed at this landfill and will emit VOCs and HAPs.

D. Internal Combustion:

Some of the haul trucks will be emptied using portable tippers powered by internal combustion engines. The engines will be rated at approximately 106 hp and will generate combustion emissions (NO_x, CO, SO_x, VOC, PM₁₀ and HAPs). The tippers are moved around the facility to the areas of disposal where they are needed and are considered "nonroad engines". Nonroad engines are excluded from the definition of "stationary source" under the Clean Air Act. [Clean Air Act §302]

Permitting authorities may not adopt or attempt to enforce any standard or other requirement relating to the control of emissions from nonroad engines [Clean Air Act §209(e)(1), (e)(2)(B)], but may impose "in use" requirements. Even though there is no guideline to what "in use" constitutes, EPA has indicated these requirements could include limitations on the hours of operations, sulfur limits in the fuel, etc [59 Fed. Reg. 31306 (June 17, 1994)]. MCAQD does not have the authority to regulate these engines' emissions, and therefore the engines' PTE is not included in emissions calculations for applicability purposes.

Additionally, there will be 2 generators at the facility: an 80 hp diesel water pump and a 49 hp diesel emergency generators. These two generators have the potential to generate combustion

emissions, but they are considered Insignificant Activities according to Appendix D of the Maricopa County Rules.

E. Leachate Collection System

Leachate is an aqueous solution generated by precipitation, dust control water, or other moisture reaching the landfill surface, which percolates through the refuse mass and is collected by a subsurface leachate collection system. Leachate collection systems will be constructed along the base of all landfill cells. These leachate collection systems will use an underground sump constructed at the low points of each landfill cell to collect the leachate. As part of normal landfill operations, the leachate sumps will be monitored monthly and after rain events. The leachate may be used for dust control over the lined landfill surface or pumped to an on-site storage tank. The leachate has the potential to emit 20 pounds per year of VOCs.

III. EMISSIONS

Based on the emission factors discussed in this section and disposal data provided by the City of Phoenix in its Title V application and subsequent addendums, MCAQD estimated the potential emissions from the landfill. Table 3.1 provides a summary of these potential emissions.

Table 3.1: Emissions Summary

| | Emissions (tpy) | | | | | |
|---------------------------------------------------------------------------------------|-----------------|-------|-----------------|-------------------------|--------------------|----------------------|
| | NO _x | CO | SO _x | VOC | PM10 | HAPs |
| Tipper Engines ^a | 28.8 | 6.2 | 1.9 | 2.3 | 2.0 | 5.9 |
| Flare ^{b,c} | 21.6 | 68.3 | 2.3 | 19.3 | 9.9 | 18.1 |
| Gasoline Tank | ----- | ----- | ----- | 1.3 | ----- | ----- |
| Non-Fugitive Emissions attributed to Gap between Collection Efficiencies ^d | ----- | ----- | ----- | 57 | ----- | ----- |
| Fugitive (landfill surface) | ----- | ----- | ----- | 19.4/3.9 ^{e,e} | 318.7 ^f | 4.6/3.5 ^f |

Notes:

^a = The tipper engines are nonroad engines. Emissions of nonroad engines are not included for applicability purposes.

^b = NO_x and CO emissions from the flare were calculated using the emission rates required by in the permit. The calculations include three flares, which accounts for approximately 25-35 years of landfill operations.

^c = VOC emissions are calculated as 39% of NMOC emissions, as per the footnote in AP-42 for sites with no codisposal.

^d = The gap in collection efficiencies is a result in the difference between the MCAQD's assessment that 90 percent of emissions can be collected versus the City's assessment that 85 percent of emissions can be collected by the landfill collection and control system. These emissions are included for applicability purposes.

^e = The first number represents potential uncontrolled emissions from the landfill during the 4th year of operation. The second number represents potential emissions after implementing a collection and control system in the 5th year of operation.

^f = These emissions are not included for applicability purposes because they are fugitive emissions emanating from the landfill surface.

A. Flares:

Potential emissions from the flares were calculated using emission factors from different sources. The NO_x and CO emission factors reflect the emission rates required in the permit. The other

emission factors used are provided in Table 3.2. It is assumed that the flare will operate 24 hours/day, 365 days/year.

The flare throughputs used for the flare calculations were 40 MMBtu/hr maximum heat release, 11.15×10^6 -m³ methane/yr and 577 Mg uncontrolled NMOC/yr. In addition, it was assumed that the facility would utilize three flares during the 25-35 years of landfill operations.

Table 3.2: Flare Emission Factors

| Pollutant | Emission Factor | Source |
|------------|---------------------------------------------------------------|-----------------------------------------------------|
| PM10 | 270 kg/10 ⁶ -m ³ methane | AP-42, Table 2.4-4 (11/98) |
| SO2 | 75.78 m ³ /10 ⁶ -m ³ methane | AP-42, Section 2.4 (11/98) |
| CO | 0.13 lb/MMBtu | Vendor Guarantee |
| NOx | 0.041 lb/MMBtu | Vendor Guarantee |
| NMOC | 2637 Mg/yr (uncontrolled) | LandGEM ^a and AP-42, Section 2.4 (11/98) |
| VOC | 1028 Mg/yr (uncontrolled) | LandGEM ^a and AP-42, Section 2.4 (11/98) |
| HCl | 85.18 m ³ /10 ⁶ -m ³ methane | AP-42, Section 2.4 (11/98) |
| Other HAPs | Varies | LandGEM ^a |

Notes:

^a = LandGEM is a model provided by the EPA to characterize generation of landfill gas emissions from municipal waste landfills.

B. Fugitive Emissions

1) Organic Compounds (VOCs, HAPs and NMOCs):

Fugitive organic compound emissions from the landfill were estimated using LandGEM, a model provided by EPA to simulate the generation and release of landfill gas generated by the decomposition of refuse. LandGEM was applied to estimate the total surface emission rate of NMOC and HAPs during the 25-35 years of landfill operation. VOCs are calculated based on the assumption within the EPA AP-42 that VOCs emissions are 39 percent by weight of NMOC emissions for no-codisposal facilities, such as the landfill.

For the landfill, LandGEM estimates were derived using methane generation rate constants for arid climates, without co-disposal of industrial solvent waste. The parameters used for the LandGEM model are listed below in Table 3.3.

Table 3.3: LandGEM Parameters

| Parameter | Source |
|-------------------------------|-----------------------------------|
| K | 0.02 yr ⁻¹ |
| L _o | 100 m ³ /Mg |
| NMOC | 4,520 ppmv |
| Methane Concentration | 32.08% by volume |
| CO ₂ Concentration | 67.92% by volume |
| | %CO ₂ = 100 - %Methane |

2) Fugitive Dust

Fugitive dust is generated from the disturbed landfill surface, earthmoving equipment, traffic on unpaved roads and the stockpile. The methods used for calculating fugitive dust are listed in Table 3.4.

Table 3.4: Methods for Calculating Fugitive Dust Emissions

| |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Landfill Surface - Emission factors from construction areas provided in the EPA Factor Information and Retrieval System (FIRE) database. |
| Earthmoving Equipment - Emission factors and parameters for uncontrolled emissions based on AP-42 Section 13.2.2 for Unpaved Roads, and Section 11.9 for Surface Mining. 75% control efficiency is assumed according to Section 13.2.2 due to watering. |
| Traffic on Unpaved Roads - Emission factors and parameters for uncontrolled emissions based on AP-42 Section 13.2.2 for Unpaved Roads. 75% control efficiency is assumed according to Section 13.2.2 due to watering. |
| Stockpile - Emission factor from construction surface areas provided in the EPA FIRE database. |

C. Tipper Engines:

NO_x, CO, SO_x, PM₁₀, VOC and HAP emissions from the tipper internal combustion engines were incorrectly calculated in this permit's application using emission factors from AP-42 Section 3.4 for Large Stationary Diesel Engines. The MCAQD recalculated the emissions using the correct emission factors from Section 3.3 of AP-42 for Diesel Industrial Engines .

D. Gasoline Storage Tank:

The permit application indicates a gasoline storage tank, with capacity of approximately 1,000 gallons, will be installed at the site. For purposes of this permit, it is estimated that the size and type of the tank will be similar to the gasoline storage tank located at the Skunk Creek landfill.

The potential to emit for the tank were calculated using Tanks 4.0. The parameters used are listed in Table 3.5.

Table 3.5: Tanks 4.0 Parameters

| | |
|--------------------------|----------------------------|
| Length | 10 ft |
| Diameter | 5 ft |
| Volume | 1000 gal |
| Throughput | 120000 gal/yr ^a |
| Color/Shade | Gray/Light |
| Shell Condition | Good |
| Vacuum/Pressure Settings | Default |
| Meteorological Data | Phoenix, AZ |
| Component | Gasoline (RVP 10) |

Notes:

^a = Throughput based on operational limit per Permit Condition 19.D.

E. Leachate Collection System

As the water trickles through the decomposing waste, it gathers various contaminants. The City of Phoenix used conservative assumptions to estimate potential emissions that could result from the use of leachate as a dust control measure (refer to Table 1 below). Emission factors, which correlate with maximum landfill leachate VOC content, were obtained from a Solid Waste Association of North America (SWANA) Technical Guidance Document entitled

"Leachate Generation, Collection & Treatment at Municipal Solid Waste Disposal Facilities". Leachate collection information was obtained from Skunk Creek Landfill records, which reflected leachate collection levels of 125 gallons per day and 45,569 gallons per year. The total potential emissions from the leachate are 20.19 pounds/year.

Table 3.6: Leachate Emissions Estimates for the SR85 Landfill

| Pollutant | Emissions Pounds per day | Emissions (pounds per year) | Emissions (tons per year) |
|--------------|-----------------------------|--------------------------------|------------------------------|
| Benzene | 0.00011 | 0.41 | 0.00021 |
| Ethylbenzene | 0.00051 | 1.86 | 0.00093 |
| Phenol | 0.00300 | 10.95 | 0.00548 |
| Toluene | 0.00188 | 6.84 | 0.00342 |
| Xylene | 0.00032 | 0.12 | 0.00006 |
| Total | 0.0553 | 20.19 | 0.01009 |

The data in Table 3.6 establishes that emissions resulting from the leachate used for dust suppression will be considered Insignificant Activities according to Appendix D of the Maricopa County Rules.

IV. APPLICABLE REQUIREMENTS

The permit application submitted by the City of Phoenix lists applicable requirements and contains compliance information as well as a certification of compliance, all of which are required as part of a Title V permit application.

The landfill is legally responsible for complying with all applicable requirements in the Title V permit. Some requirements are locally enforceable only. Only rules approved by EPA through Sections 110, 111, and 112 of the federal Clean Air Act are federally enforceable. If MCAQD has not submitted the regulation to the EPA or the EPA has not approved a submitted regulation, the rule is locally enforceable only.

A. Facility-Wide Emission Limits

1) Rule 241 - VOC Emission Limits (Permit Condition 18.A)

(a) Discussion:

Maricopa County Rule 241 requires the use of BACT for new or modified non-major sources when emissions exceed threshold limits set forth in the rule. Even though calculations show that the landfill's VOC emissions will not reach 25 tpy during the term of this permit, these emissions are dependent on the rate at which waste is received into the landfill. While BACT for this project has been determined to be a landfill gas collection and control system, it has also been determined that the collection and control system cannot be installed and operated until there is an adequate volume of landfill gas produced. However, by the time the VOC emissions from the landfill reach 25 tpy, the landfill gas generation is expected to be adequate to justify the collection and control system. Therefore, the 25 tpy limit can't be exceeded until BACT is installed. The control system installed, in this case the enclosed flare, can not be removed until VOC emissions fall below 25 tons per year (**Permit Condition 19.A.5.d**). This requirement is locally enforceable only.

- (b) Monitoring for Compliance:
To monitor the VOC emissions from the landfill, the Permittee will calculate VOC emissions from the landfill in a similar manner as NMOCs are calculated, but assumes 39% of NMOC is VOC(**Permit Condition 20.I**), and report VOC emissions on an semiannual basis (**Permit Condition 21.C.7**). Initial estimates of VOC emissions based on AP-42 default values will be refined using site-specific data once these data are collected.

2) Rule 210§302.1 b – VOC and NOx Emission Limits (**Permit Condition 18.A.2**)

(a) Discussion

Limits were placed on VOC and NOx to ensure the nonattainment area threshold of 100 TPY is not exceeded. The facility will be located in an area within Maricopa County that is currently designated as Subpart 1 (Basic) non attainment for ozone. The facility voluntarily requested the NOx and VOC limits in an August 2, 2004 Addendum to the Title V application.

The August 2, 2004 Addendum referenced the EPA's Compilation of Air Pollutant Emission Factors (EPA Document AP-42, Section 2.4, November 1998). The document states that reported collection efficiencies typically range from 60 to 85 percent, with an average of 75 percent most commonly assumed, unless site-specific collection efficiencies are available. At the time of permitting, no site-specific collection efficiencies were available. In light of the lack of site-specific data, MCAQD requested that the City of Phoenix utilize a 90% collection efficiency for the landfill gas capture and control system (flare).

After review of the information available for new landfill installations in Maricopa County and elsewhere in the United States, the City determined that they could expect to collect at least 85% of emissions, and the flare control efficiency (destruction efficiency) could be assumed to be 98%.

The Addendum provided by the City established the City's intention to assume an 85% capture for the flare. The City calculated the 5% differential between the MCAQD-specified 90% capture and the City's assumed 85% capture rates and termed these emissions the "Gap Between the Capture Efficiency Assumptions." The gap amounted to 57 TPY of VOC emissions. The uncaptured "Gap" emissions are added to the emissions from the flare (post 98% control) to determine the total "Non-Fugitive Emissions, as stated in Table 3.1.

LandGem was used to determined the total NMOC emissions from the landfill to be 2,906 TPY. Collection of 85% of the emissions results in 963 TPY of VOCs going to the flare for control. The flare has a control efficiency of 98%, resulting in 19.3 TPY of VOC emissions. The gap in emissions between the 85% collected and the 90% collection MCAQD requested yields a gap of 57 TPY of VOCs between the collection efficiency assumed by the city and the collection efficiency assumed by MCAQD. Adding the gap emissions (57 TPY) to the emissions not controlled by the flare (19.3 TPY) yields a total of 76 TPY of "Non-Fugitive VOC emissions." Table 1 in **Permit Condition 18.A.2** shows the emission limit of non-fugitive emissions from the facility. Table 3.8 below details the calculated emissions.

Table 3.8 : Emission Rates

| Emission Description | Units | NMOC | VOC |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------|
| Maximum Total Emissions (using LandGem) | Mg/yr | 2,637 | 1,028 |
| | tpy | 2,906 | 1,133 |
| Emissions Captured by the LFG Collection/Destruction System (using MCAQD's assumed 90% capture) | tpy | 2,615 | 1,020 |
| Emissions Captured by the LFG Collection/Destruction System (using the City's assumed 85% capture) | tpy | 2,470 | 963 |
| Gap Between Capture Efficiency Assumptions by MCAQD and the City (difference in estimated emissions from 85% capture to 90% capture) | tpy | 145 | 57 |
| Emissions Controlled by the LFG Collection/Destruction System (using 85% capture and 98% control of emissions) | tpy | 2,421 | 944 |
| Emissions not Controlled by the LFG Collection/Destruction System (difference in estimated emissions captured and emissions controlled) | tpy | 49.4 | 19.3 |
| Total Non-Fugitive Emissions (Emissions not Controlled by the LFG Collection/Destruction System plus the Gap Between Capture Efficiency Assumptions) | tpy | 195 | 76 |

(b) Monitoring for Compliance

To monitor the VOC emissions from the landfill, the Permittee will calculate VOC emissions from the landfill in a similar manner as NMOCs are calculated, but assumes 39% of NMOC is VOC(**Permit Condition 20.I**), and report VOC emissions on an semiannual basis (**Permit Condition 21.C.7**). Initial estimates of VOC emissions based on AP-42 default values will be refined using site-specific data once these data are collected.

B. Rule 241§301 – BACT (Permit Condition 18.B**)**

1) Discussion:

The maximum emissions generated by the proposed flare are summarized in Table 3.1 of this TSD, which reflects the first five years of operation of the proposed facility. The first flare is projected to be installed in the 4th year of operations approximately and will control the emissions of organic compounds from the landfill in accordance with 40 CFR Subpart WWW.

The flare proposed in the permit application will have emissions of NO_x and CO as follows. This information is based on updated flare manufacturer information provided to MCAQD in a May 6, 2004 Addendum to the Title V application.

NO_x: 0.041 lbs per MMBtu of landfill gas

CO: 0.13 lbs per MMBtu of landfill gas

These emission rates are equal to recent MCAQD BACT¹ determinations for municipal landfill enclosed flares and therefore are acceptable as BACT for this facility.

- 2) **Monitoring for Compliance:**
The vendor guarantees for the flare are NOx: 0.041 lbs per MMBtu of landfill gas and CO: 0.13 lbs per MMBtu of landfill gas, and these are also the emission rates required by this permit.

To demonstrate compliance with the emission rates, the Permittee shall conduct a performance test on the flare within 180 days of commencing operation (**Permit Condition 22**).

C. County Rule 300 and SIP Rule 30- Opacity Limits (**Permit Condition 18.C**)

- 1) **Discussion:**
County Rule 300 restricts visible emissions from any source to 20% opacity, other than emissions of uncombined water. County Rule 300 and the 20% opacity limitation of these permit conditions are locally enforceable only. SIP Rule 30 and the 40% opacity limitation of these permit conditions are federally enforceable.
- 2) **Monitoring for Compliance:**
The Permittee will monitor for compliance with the opacity requirements of this permit by performing a weekly walk around the facility, looking for visible emissions from the flares, emergency generator(s), and water pump(s) (**Permit Condition 20.D.1**).

If visible emissions are observed from any of these devices, landfill will be required to obtain an opacity reading conducted in accordance with EPA Reference Method 9 by a certified visible emissions (VE) reader. If the Permittee has not received either a compliance status notification (CSN) or a Notice of Violation (NOV), the initial Method 9 opacity reading shall be taken within (3) days of observing the visible emissions. If the Permittee has received either a CSN or NOV in the 12 months prior to the observation of visible emissions, the reading must be taken within (1) day of the initial observation. After the initial Method 9 opacity reading is taken, follow-up opacity readings are required for 14 consecutive days, followed by weekly readings until there are no visible emissions observed while the unit is in operation. (**Permit Condition 20.D.3**)

A certified Method 9 reading of greater than 20% opacity at any time constitutes a violation of the opacity limitations of this Permit, regardless of whether visible emissions have persisted for three subsequent days.

D. County Rule 310 and SIP Rule 310- Fugitive Dust Sources (**Permit Condition 18.D**)

- 1) **Discussion:**
County Rule 310 restricts visible fugitive dust emissions to 20% opacity. It also provides the source with an affirmative defense if there is a violation of the opacity limit due to a wind event.

¹ Northwest Regional Landfill, issued 10/2003, BACT for enclosed flare is NOx: 0.041 lb/MMBtu and CO: 0.13 lb/MMBtu.

- 2) Monitoring for Compliance:
The permittee has submitted a dust control plan showing how they will comply with the requirements of Rule 310. The landfill is required to implement various control measures and work practices to restrict dust emissions from different areas of the landfill. The control measures restrict visible emissions to 20 percent opacity and establish stabilization requirements for dust generating operations.

Work practices and control measures that restrict fugitive dust emissions are described for the activities listed below (**Permit Condition 19.B**). Test methods to be used for determining compliance are also described in the permit (**Permit Condition 20.E**).

- a) Bulk Material hauling/Transporting Off-Site Onto Paved Public Roadways
- b) Bulk Material Hauling/Transporting On-Site Within the Boundaries of the Work Site
- c) Open Storage Piles
- d) Spillage, Carry-Out, Erosion, and/or Trackout
- e) Earthmoving Operations on Disturbed Surface Areas 1 Acre or Larger
- f) Easements, Rights-of-Way, and Access Roads for Utilities
- g) Unpaved haul/access roads

E. SIP Rule 32 - SO_x Emission Limits (Permit Condition 18.E)

- 1) Discussion:
Emissions of sulfur oxides are not to result in ground level SO₂ concentrations at any place beyond the premises of the landfill facility that exceed the SO₂ limits specified in SIP Rule 32 §F. This SIP Rule is based on an old Maricopa County rule. The limits are restricting only for large combustion sources. SO_x emissions from one flare burning landfill gas produces very low SO_x emissions.
- 2) Monitoring for Compliance with SO_x limits:
A screen model was run for the landfill to determine if it exceeds the emission concentration for Sulfur Dioxide (SO_x) in SIP Rule 32 (see table 4.1)

Table 4.1: SO_x Emission Limits from SIP Rule 32

| Concentration of SO _x | Averaging Time |
|----------------------------------|----------------|
| 850µg/m ³ | 1 hour |
| 250µg/m ³ | 24 hour |
| 120µg/m ³ | 72 hour |

The results of the SCREEN3 Air Emissions model performed for the landfill are listed below. It is important to note that SCREEN3 is not specific to chemical/pollutant species and can be used to model any pollutant coming out of the stack.

The maximum 1-hour concentration of sulfur oxides predicted was 8.89 micrograms/cubic meter at a distance of 1272 meters from the flare.

The simple terrain inputs used in the SCREEN3 model for SO_x are listed below:

- a) A point source type was used assuming emissions would be generated from a flare.
- b) The emission rate used was 0.76 grams/second. The emission rate was calculated based on the following:

- 6.0 lb/hr of emissions, shown in the permit application as the maximum hourly emission rate of SO_x generated by the flare.
- Operation of the flare was assumed to be 365 days/year, 24 hours per day.
- c) Stack height = 8.23 m (27 ft) (flare stack height represents worst-case scenario of Title V enclosed flares permitted by MCAQD).
- d) Total Heat Release = 28×10^5 cal/sec (40 MMBtu/hr as presented in Title V application)
- e) The urban model was used presuming a more conservative estimate since potential impacts are so far below threshold limits.

Given that the concentration of SO_x from this facility is much lower than the limit established in SIP Rule 32, and that exceedance of that such limit would be impossible without revising the permit to add more equipment, the Permittee is not required to do any further monitoring of SO_x.

F. County Rule 320 - Hydrogen Sulfide (Permit Condition 18.F)

- 1) Discussion:
Rule 320 restricts emission concentrations of H₂S beyond the facility's fenceline to 0.03 ppmv.
- 2) Monitoring for Compliance with Hydrogen Sulfide:
The Landfill has to maintain a log of odor complaints on site (**Permit Condition 20.F**). Hydrogen sulfide does not have to be monitored on a regular basis since the gas collection and control system ensures that gas is being collected and removed, but in the event that there are 3 or more complaints during 4 consecutive weeks, the landfill will have to start monitoring the H₂S concentrations on site (**Permit Condition 20.A**). The monitoring will be conducted with a gas analyzer capable of detecting the gas at parts per billion concentrations, at 12 different locations throughout the site, and between 3 and 6 feet above the surface. Three readings shall be taken at each location. If the monitoring shows an exceedance of the 0.03 ppmv, the landfill will have to implement a plan to control H₂S within 7 days of the finding. Monitoring will be conducted weekly until three weeks of data indicate the emissions have been controlled to below the standard. Records of the complaints and the monitoring shall be reported to the Compliance section.

G. 40 CFR 60 Subpart WWW - Standards of Performance for Municipal Solid Waste Landfills (Permit Condition 19.A)

The permit conditions discussed below from the NSPS Subpart WWW. This landfill is expected to exceed the 50 Mg/yr non-methane compound (NMOC) surface emission threshold during this permit term. As a result of exceeding the 50 Mg/yr NMOC emission threshold, the facility will be required to install a collection and control system. In addition, if the facility reaches 20 tons per year of VOC emissions, as calculated by **Permit Condition 20.I**, prior to NMOC emissions equal to or greater than 50 megagrams per year, the VOC emission will trigger the start of the design of the Collection and Control System as specified below.

The permit conditions listed below discuss operational requirements for such collection and control system.

- 1) NMOC Calculations (**Permit Condition 19.A.1**)
 - a) Discussion:
This permit condition requires that the Permittee submit a design plan for the collection and control plan within 1 year and install a collection and control system within 30 months of the NMOC emission rate equaling or exceeding the threshold.

b) Monitoring for Compliance:

NMOC calculations (Tier 1, 2 or 3) and reports as required by this permit (**Permit Condition 20.B**) and submitted by the Permittee will ensure that a collection and control system is installed when the landfill's emissions equal or exceed 50 Mg/yr NMOC. A landfill facility may use Tier 1 calculations, which are based on the default input values, if the NMOC emission rate calculated is less than 50 Mg/yr. If the calculated NMOC emission rate is equal to or greater than 50 Mg/yr, Tier 2 calculations, which require site-specific NMOC concentration measurements, or Tier 3 calculations, which are based on site-specific NMOC concentration and methane generation rate constants are required.

If the Tier 1 calculations show NMOC emission above 50 Mg/yr then the landfill facility can either implement the required NMOC control system, or conduct Tier 2 or Tier 3 calculations to show that NMOC emission is less than 50 Mg/yr. Conducting Tier 2 and 3 calculations requires field measurements.

2) Collection System Design Requirements (**Permit Condition 19.A.2**))

a) Discussion:

This permit condition lists the requirements that the active collection system must meet at the facility. An active collection system is defined as a collection system that uses gas moving equipment (fan, blower, compressor, etc.).

b) Monitoring for Compliance:

The landfill's collection and control system is expected to be installed during the term of this permit. The design will be submitted to MCAQD for approval, and the system will be required to be in compliance with these sections. The permittee shall keep an up-to-date plot map showing existing and planned collectors with location labels, installation dates, asbestos containing waste locations and the location of non-producing areas that do not have collection for the life of the collection system. (**Permit Condition 20.C.9**)).

3) Control System Design Requirements- **Permit Condition 19.B.4**).

a) Discussion: This permit condition establishes the design requirements for the landfill gas collection and control system. If an enclosed system is used, the control system must either reduce Non Methane Organic Compounds (NMOC) by 98% by weight or reduce the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3% O₂. The control device used must be operated within the parameter ranges established during the most recent performance test.

b) Monitoring for Compliance:

The landfill will control landfill gas by way of an enclosed flare before the VOC emissions reach 25 TPY. In order to ensure the equipment is meeting the required removal efficiency or outlet concentration, performance testing is required (**Permit Condition 22**), as well as provisions on calibrating, maintaining and operating the enclosed flare (**Permit Condition 19.A.7**)). Records of the performance testing and monitoring parameters shall be maintained (**Permit Condition 20.C.7** and **8**)).

4) Operation During Emergency and Maintenance (**Permit Condition 19.A.5**)

a) An enclosed flare will be used to control emissions at all times (when VOC emissions reach 25 TPY), except during emergency and maintenance. If the landfill opts to use an alternative device (not an enclosed flare), the Control Officer may approve (or

disapprove) the use of such a device, after review of the design and operating parameters of the alternative device. This Permit Condition allows for a BACT determination to be made on a case by case basis for temporary emergency installations, but requires maintenance installations to meet the requirements of Rule 241 and 40 CFR 60 §752.

b) Monitoring for Compliance:

The Permittee is required to maintain records of the actions taken during an SSM (Startup, Shutdown, and Malfunction). Emergencies are considered malfunctions and maintenance that involves shutdown of the flare is to be included in the SSM plan. **(Permit Condition 20.K)**

5) Collection/Control System Removal – **(Permit Condition 19.A.8)**

a) Discussion:

Before a landfill's collection/control system can be removed, the source must demonstrate the landfill is closed (as defined in 40 CFR 60.751), that the collection/control system has been in operation at least for 15 years, and that NMOC emissions are less than 50 Mg/yr as measured in 3 consecutive tests, no less than 90 days apart, and no more than 180 days apart.

b) Monitoring for Compliance:

This is not a closed landfill as defined in 40 CFR 60.751. The landfill's collection and control system is expected to be installed during the term of the permit. To determine the NMOC emissions after the installation of the collection and control system, the Permittee shall use the calculations described in the Permit **(Permit Conditions 20.C.1 and 2)**.

5) Collection System Operations - **Permit Condition 19.A.6)**

a) Discussion:

Subsections a) through g) of this permit condition list how the collection system shall be operated. Some of the requirements are:

- (1) Negative pressure at each wellhead unless there is a fire, increased temperature, a geomembrane or synthetic cover, or a well is decommissioned.
- (2) Temperature of the gas at each wellhead less than 55°F with either a nitrogen level less than 20 % or oxygen level less than 5%. Test methods for N₂ and O₂ content are described.
- (3) Methane concentration less than 500 ppm above background at the surface.
- (4) Collected gases vent to control. If such control is inoperable, the gas mover system shall be shut down and all valves shall be closed within one hour.
- (5) Control/Treatment system shall be operated at all times when the gas is being collected and routed to the system.
- (6) Corrective action shall be taken if any of the subsections above are not being met.

b) Monitoring for compliance:

The Permittee shall use the methods described in the subsections of this permit condition to monitor the N₂ and O₂ content, and the methane concentration at the surface **(Permit Condition 19.A.13))**. Procedures for compliance with the surface methane operational standard and specifications on the instrumentation and monitoring devices are described in the Permit **(Permit Conditions 20.C.3) and 4))**. Also, for the purposes of demonstrating compliance with the design requirements of the collection system, the permittee shall install a sampling port and a thermometer or another device to be able to measure the temperature. The gauge pressure and concentrations of O₂ and N₂ shall be measured on a monthly basis **(Permit Condition 19.A.11))**.

6) Collection System Corrective Action - **Permit Conditions 19.A.7) and 9)**

a) Discussion:

These permit conditions indicates procedures to take corrective action if positive pressure exists at the gas collection header or if one of the operating parameters described in 40 CFR 60.755(a)(5) is exceeded.

b) Monitoring for Compliance:

For the purposes of demonstrating compliance with the design requirements of the collection system, the Permittee shall install a sampling port and a thermometer or another device to be able to measure the temperature. The gauge pressure and concentrations of O₂ and N₂ shall be measured on a monthly basis (**Permit Condition 19.A.11)**).

H. County Rule 210 - Requirements for the Internal Combustion Engines (**Permit Condition 19.C)**

1) Discussion:

There are 2 generators at the site (80hp water pump and 49hp emergency generator) which are considered Insignificant Activities. According to the supplemental letter to the permit application dated 11/7/03, the maximum operations per year for each engine are 500 hours. On this basis, the NO_x and CO emissions are below the 4,000 lbs/year threshold for Insignificant Activities (Appendix D of Maricopa County Rules). The operations of the (2) engines has been limited to 500 hours of emergency use and routine testing .

The trailer tippers used at the landfill are moved to different sites within the stationary source. According to EPA's definition the trailer tipper are nonroad engines (40 CFR 81.1602). Even though permitting authorities may not control emissions from nonroad engines, they may impose "in use" requirements. Such requirements could include limitations on the hours of operation, sulfur limits in fuel, etc (59 Fed. Reg. 31306).

The landfill is limited to burning diesel with 0.05% sulfur or less in all internal combustion engines.

2) Monitoring for Compliance:

To monitor for compliance, the source must keep records of the sulfur content of the diesel fuel burned (**Permit Condition 20.G)** and hours of operation of the emergency generator and water pump.

I. 40 CFR 63 Subpart AAAA - Requirements for Startup, Shutdown and Malfunction (SSM) (**Permit Condition 19.E.6)**

1) Discussion:

40 CFR 63 Subpart AAAA requires compliance with the requirements of 40 CFR 60 Subpart WWW and after installation of a collection and control system, requires compliance with an SSM plan as well as the general provisions listed in Table 1 of such subpart.

Table 1 of Subpart AAAA of 40 CFR 63 (MACT standard for municipal landfills) lists the NESHAP general provisions applicable to Subpart AAAA.

Table 4.2: Table 1 of Subpart AAAA of Part 63.--Applicability of NESHAP General Provisions to Subpart AAAA

| Part 63 Citation | Description | Explanation |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 63.1(a) | Applicability: general applicability of NESHAP in this part. | Affected sources are general already subject to the provisions of paragraphs (a)(10)- (12) through the same provisions under 40 CFR, part 60 subpart A. |
| 63.1(b) | Applicability determination for stationary sources. | |
| 63.1(e) | Title V permitting. | |
| 63.2 | Definitions. | |
| 63.4 | Prohibited activities and circumvention. | Affected sources are already subject to the provisions of paragraph (b) through the same provisions under 40 CFR, part 60 subpart A. |
| 63.5(b) | Requirements for existing, newly constructed, and reconstructed sources. | |
| 63.6(e) | Operation and maintenance requirements, startup, shutdown and malfunction plan provisions. | |
| 63.6(f) | Compliance with nonopacity emission standards. | Affected sources are already subject to the provisions of paragraphs (f)(1) and (2)(i) through the same provisions under 40 CFR, part 60 subpart A. |
| 63.10(b)(2)(i)-(b)(2)(v) | General recordkeeping requirements. | |
| 63.10(d)(5) | If actions taken during a startup, shutdown and malfunction plan are consistent with the procedures in the startup, shutdown and malfunction plan, this information shall be included in a semi-annual startup, shutdown and malfunction plan report. Any time an action taken during a startup, shutdown and malfunction plan is not consistent with the startup, shutdown and malfunction plan, the source shall report actions taken within 2 working days after commencing such actions, followed by a letter 7 days after the event. | |
| 63.12(a) | These provisions do not preclude the State from adopting and enforcing any standard, limitation, etc., requiring permits, or requiring emissions reductions in excess of those specified. | |
| 63.15 | Availability of information and confidentiality. | |

2) Monitoring for Compliance:

Compliance with 40 CFR 63 Subpart AAAA is determined through records kept by the Permittee as specified in this permit and 40 CFR 60 Subpart WWW, except that the annual report required by 60.757(f) shall be submitted every six months (**Permit Condition 21.F**).

40 CFR 63 Subpart AAAA also requires that records be kept regarding the implementation of the SSM plan and records as specified in Table 1 of the Subpart (**Permit Condition 20.K**)

J. Reporting Requirements

Reporting requirements for this landfill are found in the General Conditions of the permit (Conditions 1-17) and Condition 21 of the permit.

Permit Conditions 21.A and B are reports required by subpart WWW of the NSPS. When the landfill closes, a closure report shall be submitted to the Control Officer. After this report has been submitted, no waste can be placed in the landfill until a modification is filed. Before a control equipment can be removed or the operation of that equipment can stop, the source has to submit a report to the Control Officer that will demonstrate that the equipment is no longer necessary. Landfill gases have to be controlled a minimum of 15 years, and have to be controlled until it is demonstrated that NMOC production is less than 50 Mg/yr and that VOC emissions are below 25 tons per year (locally enforceable only).

Permit Condition 21.C requires the submission of a semi-annual monitoring report, including deviation reporting. The report shall be very detailed and should include information as any day, week or month that any monitoring was required but not performed, a reason for those deviations, and any action taken to ensure that the monitoring will be performed in the future. Additionally, deviations from specified operating ranges or emission limitations or standards should be included, with any additional information.

To allow the Permittee flexibility in coordinating the filing of semiannual monitoring reports with the other data gathering and reporting activities at the facility, the Permittee may select the initial reporting period to be less than 6 months. However, follow-up reporting periods must be in 6-month intervals starting from the end of the initial reporting period.

Permit Condition 21.D requires immediate notification to the Control Officer of any actions taken during an SSM that are inconsistent with the procedures in the SSM plan. Such notifications shall be in the form of a call or fax within 2 working days followed by a letter postmarked within 7 days after the end of the event.

Permit Condition 21.E requires that the landfill submit an initial design capacity report, amended design capacity reports if needed, and an annual NMOC emission rate report.

Permit Condition 21.F requires semiannual report to be submitted to the Control Officer that explains exceedances of applicable parameters monitored, if any.

Permit Condition 21.G lists additional information to be submitted with the initial performance test at this facility.

K. Testing Requirements

Permit Condition 22 of this Permit describes the procedures for testing the flare and submitting a report with the results. Testing is required within 60 days after the flare has achieved capability to operate at the maximum production rate on a sustained basis but no later than 180 days after initial start-up.

1) NMOC:

Initial testing of this equipment to determine the NMOC destruction efficiency is required by the NSPS (40 CFR Subpart WWW).

i. NOx and CO:

Initial testing of this equipment is required to determine the NOx and CO emission rates.

(Note: The following discussion provides justification for testing in accordance with Rule 200 §309.2)

- a) Exposure to NO_x and CO emissions been determined by the USEPA to adversely affect human health. PTE calculations for the flare are based on manufacturer guaranteed factors. Since the vendor guaranteed emission rates are determined to be BACT, MCAQD has determined it necessary to require testing for emission factor verification.
- b) The test methods to be used are EPA approved Methods 7E for NO_x and 10 for CO. These methods have been shown to produce scientifically acceptable results. Alternate methods will be allowed if it is believed that such methods will also produce scientifically acceptable results.
- c) EPA Test Methods 7E and 10 have been determined to be technically feasible.
- d) These methods have been shown to be reasonably accurate.
- e) After examining the estimated cost of the tests, the Department believes that the cost of conducting these tests is reasonable to establish a base line of emissions, to avoid potential fines, to establish parametric monitoring, to demonstrate adequacy of a maintenance program on equipment or controls, to provide emissions rate information for possible future PSD/NSR modeling requirements and to establish emissions rate information for potential environmental justice purposes.

V. DISCUSSION OF HAPS

The permit application for this facility included ISC3 dispersion models conducted for HAPs. ISC3 modeling was checked by Arizona Department of Environmental Quality and found to be acceptable.

A. ISC3 Model:

The emission rates were modeled using site-specific parameters and concentrations obtained from a set of gas samples collected at the Skunk Creek landfill. The source was modeled as an area source, at an elevation of 10 meters above surrounding grade. Meteorological data was available for the Gila Bend Airport for 1994 and 1995. A unit emission rate of 1 gram/second for a generic species was spread across each of the modeled areas and prorated according to the actual emission rates to estimate the maximum concentrations.

Maximum uncontrolled emissions from the landfill surface (which will most likely occur in the 4th year of operation) were modeled and compared to the AAAQGs. The results listed in Table 5.1 show that the AAAQGs were not exceeded for any compound.

Table 5.1: ISC3 Results for Uncontrolled Emissions from the Landfill Surface During the Fourth Year of Operation

| POLLUTANT | CONCENTRATIONS ($\mu\text{g}/\text{m}^3$) | | | | | |
|---------------------------|------------------------------------------------|-------|-----------|-------|-----------|------------|
| | 1-HR | | 24-HR | | ANNUAL | |
| | Predicted | AAAQG | Predicted | AAAQG | Predicted | AAAQG |
| Acrylonitrile | 0.38 | 20 | 0.04 | 5.3 | 0.011 | 0.015 |
| Benzene | 1.62 | 170 | 0.17 | 44 | 0.047 | 0.12 |
| Bromodichloromethane | 0.39 | 78 | 0.04 | 21 | 0.01 | 0.06 |
| Carbon Disulfide | 0.36 | 90 | 0.037 | 24 | N/A | No listing |
| Carbon Tetrachloride | 0.3671 | 92 | 0.0376 | 24 | 0.0106 | 0.066 |
| Chlorobenzene | 0.38 | 11000 | 0.039 | 2800 | N/A | No listing |
| Chloroform | 0.38 | 60 | 0.039 | 16 | 0.011 | 0.043 |
| Chloromethane | 0.37 | 770 | 0.038 | 200 | 0.011 | 0.56 |
| 1,4-Dichlorobenzene | 0.73 | 200 | 0.075 | 53 | .021 | 0.15 |
| 1,1-Dichloroethane | 3.11 | 8400 | 0.32 | 3200 | N/A | No listing |
| 1,2-Dichloroethane | 0.37 | 53 | 0.038 | 14 | 0.011 | 0.038 |
| 1,1-Dichloroethene | 0.39 | 130 | 0.039 | 63 | N/A | No listing |
| 1,2-Dichloropropane | 0.38 | 71 | 0.039 | 19 | 0.011 | 0.051 |
| Ethylbenzene | 8.13 | 4500 | 0.83 | 3500 | N/A | No listing |
| Hexane | 11.26 | 5400 | 1.15 | 1400 | N/A | No listing |
| Methyl Ethyl Ketone | 13.67 | 7400 | 1.4 | 4700 | N/A | No listing |
| 1,1,2,2-Tetrachloroethane | 0.37 | 24 | 0.04 | 6.4 | 0.011 | 0.018 |
| Toluene | 0.37 | 4400 | 0.04 | 3000 | N/A | No listing |
| 1,1,1-Trichloroethane | 0.37 | 57000 | 0.038 | 15000 | N/A | No listing |
| 1,1,2-Trichloroethane | 0.37 | 87 | 0.038 | 23 | 0.011 | 0.062 |
| Trichloroethene | 2.09 | 810 | 0.21 | 210 | 0.06 | 0.580 |
| Vinyl Chloride | 0.37 | 16 | 0.04 | 4.3 | 0.011 | 0.012 |
| Xylenes | 25.97 | 5400 | 2.66 | 3500 | N/A | No listing |

The maximum controlled emissions from the landfill surface also were modeled. These emissions were calculated based on the landfill's physical and operational design as described in the Landfill's Facility Plan, which was submitted to the Arizona Department of Environmental Quality. This design is approximately 700 acres in size, and consists of three waste disposal cells, a buffer zone, ancillary buildings, and a retention basin. The lined portion of the Landfill (which is where the waste will be stored) comprises approximately 370 acres of the total Landfill area and will support approximately 25–35 years of waste disposal operations.

The Title V Air Permit Application Update Revised Appendix F, which was submitted to the MCAQD in August of 2004, contains a complete description of the sophisticated emission analysis that was conducted. A summary of the modeling results provided in that Update is provided in Table 5.2. This table shows that the AAQGs were not exceeded for any compound.

Table 5.2: ISC3 Results for Controlled Emissions from the Landfill Surface for Approximately 370 Acres of Waste Disposal Operations

| POLLUTANT | CONCENTRATIONS ($\mu\text{g}/\text{m}^3$) | | | | | |
|---------------------------|------------------------------------------------|-------|-----------|-------|-----------|------------|
| | 1-HR | | 24-HR | | ANNUAL | |
| | Predicted | AAAQG | Predicted | AAAQG | Predicted | AAAQG |
| Acrylonitrile | 3.72E-9 | 20 | 4.41E-10 | 5.3 | 1.49E-10 | 0.015 |
| Benzene | 5.85E-3 | 170 | 6.93E-4 | 44 | 2.34E-4 | 0.12 |
| Bromodichloromethane | 3.03E-4 | 78 | 3.59E-5 | 21 | 1.21E-5 | 0.06 |
| Carbon Disulfide | 0.29 | 90 | 0.03 | 24 | NA | No listing |
| Carbon Tetrachloride | 9.41E-2 | 92 | 1.11E-2 | 24 | 3.76E-3 | 0.066 |
| Chlorobenzene | 0.29 | 11000 | 0.04 | 2800 | NA | No listing |
| Chloroform | 3.43E-2 | 60 | 4.06E-3 | 16 | 1.37E-3 | 0.043 |
| Chloromethane | 4.40E-2 | 770 | 5.21E-3 | 200 | 1.76E-3 | 0.56 |
| 1,4-Dichlorobenzene | 8.89E-7 | 200 | 1.05E-7 | 53 | 3.55E-8 | 0.15 |
| 1,1-Dichloroethane | 2.38 | 8400 | 0.29 | 3200 | NA | No listing |
| 1,2-Dichloroethane | 3.82E-3 | 53 | 4.52E-4 | 14 | 1.52E-4 | 0.038 |
| 1,1-Dichloroethene | 0.30 | 130 | 0.04 | 63 | NA | No listing |
| 1,2-Dichloropropane | 1.64E-2 | 71 | 1.95E-3 | 19 | 6.56E-4 | 0.051 |
| Ethylbenzene | 6.26 | 4500 | 0.75 | 3500 | NA | No listing |
| Hexane | 8.70 | 5400 | 1.04 | 1400 | NA | No listing |
| Methyl Ethyl Ketone | 10.51 | 7400 | 1.26 | 4700 | NA | No listing |
| 1,1,2,2-Tetrachloroethane | 3.80E-3 | 24 | 4.52E-4 | 6.4 | 1.52E-4 | 0.018 |
| Toluene | 51.62 | 4400 | 6.16 | 3000 | NA | No listing |
| 1,1,1-Trichloroethane | 0.29 | 57000 | 0.03 | 15000 | NA | No listing |
| 1,1,2-Trichloroethane | 1.13E-2 | 87 | 1.34E-3 | 23 | 4.53E-4 | 0.062 |
| Trichloroethene | 0.137 | 810 | 1.63E-2 | 210 | 5.49E-3 | 0.580 |
| Vinyl Chloride | 1.84E-2 | 16 | 2.18E-3 | 4.3 | 7.33E-4 | 0.012 |
| Xylenes | 20.02 | 5400 | 2.39 | 3500 | NA | No listing |

VI. NON-APPLICABLE REQUIREMENTS

County Rule 311 - Particulate Matter from Process Industry: Rule 311 contains PM emission limits for process industries, and because the landfill is not a “process industry”, the rule is not applicable.

40 CFR 60 Subpart Kb Gasoline Storage Tanks - 40 CFR 60.110b(a) exempts storage tanks less than 40 cubic meters (10,556 gallons approx.). The gasoline storage tank at this facility is not expected to exceed 1000 gallons.

